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GALLSTONES AND THEIR TREATMENT.

An Address delivered before the Queensland Branch of the British Medical Association.

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I do not know whether I ought not to apologise for going somewhat out of the usual routine in connection with the presidential address in avoiding questions of ethics, but it appeared to me that the ground had been so fully gone over in recent years by my predecessors in the chair that little new was left for me to say; therefore, on this occasion I I am taking up a subject which has interested me very much for some considerable time. I refer to the surgery of the gall-bladder and its adjuncts. I propose to-night making a few remarks on gallstones and their treatment.

The importance of this subject is shown by the fact that post-mortem records in all ages and of both sexes prove that gallstones are present in from 5 to 10 per cent. In Strasburg the record is 12 per cent., in Kiel 5 per cent., and in Manchester 44 per cent.; but as these figures are taken from hospital patients representing the working classes, who are the least subject to gallstones, the estimate is probably below the mark. On the other hand, in India and in the East generally, gallstones are said to be extremely rare. Gallstones may vary in size from a concretion just perceptible up to a mass the size of a tennis ball or even larger. They are of various shapes, the surface being smooth and regularly faceted as a rule. When large they are usually single, but when small or moderate in size several hundreds may be present. The colour is variable, from grey to almost black, but usually a dark yellow or brown. In consistency they are usually firm, but may without much difficulty be broken by pressure; they may be hard as a lithic acid calculus or almost as soft as putty. The chief constituent is cholesterin, but bile salts, bile pigments, lime, mucus, and rarely foreign bodies may enter into their composition. Although cholesterin is always present in the bile, very little is known of the process which determines its existence. As there is no proof that the liver excretes it from the blood, or that it is the result of hepatic metabolism, we are driven to the conclusion that it is formed in the bile ducts or gall-bladder, and as it is found in other passages lined by mucous membrane where there is no bile seen, there is no reason to believe that it is formed from any constituent of the bile, but rather that it is a product of the epithelium of the bile passages—that, in fact, it is a secretion of mucous membranes generally. Why cholesterin should form concretions in some people and not in others may depend on various causes. In some cases it may occur in positive excess, still in others there may be a diminution of the bile salts which should hold the cholesterin in solution. There is no doubt that the longer bile remains in the gall-bladder the more cholesterin it will contain. Anything, therefore, which causes stagnation of bile may dispose to gallstones. On the other hand, whatever leads to a regular emptying of the bile passages will tend to clear out incipient collections of cholesterin crystals and mucus, and tend to prevent the formation of gallstones. Although gallstones may occur at any age, they are rarely found under the ages of 25 to 30. They occur more frequently in women than in men. Out of 228 post-mortem examinations on women in the Manchester Royal Infirmary, 18 cases were found to have gallstones; out of 542 post-mortem examinations on men, 16 cases were of gallstones, which gives 79 per cent. of women and 29 per cent. in male subjects. The wearing of corsets, which tend to force down the front of the liver and to depress the fundus of the gall-bladder, is probably a distinct etiological factor, especially when combined with want of exercise.

Want of exercise leads to stagnation of bile in the gall-bladder and to the deposition of cholesterin, since the gall-bladder is hindered in its expulsive efforts by the want of exercise. Catarrh of the gall-bladder and bile ducts probably acts as a cause in two ways: in the first place it leads to stagnation of bile by paralysis of the muscular coats of the passage, and in the second case by increasing the amount of cholesterin present. Thudichum, in his work on gallstones, states he cannot find any record in existence of the discovery of gallstones in the wild carnivora; while Brockbank can find no evidence of them in the wild herbivora, though in dogs fed on farinaceous foods they are found occasionally. In man, who is omnivorous, they occur in from 5 to 12 per cent. It will thus be seen that in those who take an abundance of albuminous material in their food and where, therefore, the bile salts are in sufficient quantity, there is a tendency to the deposition of cholesterin, whereas when little albuminous food is taken and the bile salts are presumably insufficient to hold the cholesterin in suspension, gallstones form.

Symptoms.—We must remember in the first place that gallstones are found after death without having produced any symptom during life; usually in such cases they are in the gall-bladder and not in the ducts, and there are no signs of inflammatory irritation. There can be no doubt that a gallstone may ulcerate its way through the gall-bladder into the peritoneal cavity with few or no signs that such serious organic mischief is going on, and set up fatal inflammation. This occurred some years ago in a case in my own practice. In some cases we may get a history of dyspepsia and ill-defined abdominal pain, but there may be an entire absence of characteristic symptoms. The ordinary symptoms are constant acute attacks of pain, occurring at irregular intervals, often without apparent cause. They are usually accompanied by vomiting, and if severe, by collapse. They may be followed by jaundice, but this is by no means constant. Accompanying these symptoms we usually find much depression of spirits, want of appetite, and loss of weight. The formation of a tumour in the region of the gall-bladder is rarely seen in acute cases; however, it is a frequent sign. So long as the stones are in the cystic duct there is nothing to cause jaundice, but should they be embedded in the common duct, the passage of the bile is obstructed and jaundice ensues. It is in these cases that we find the chief difficulty in coming to a decision concerning operation. Chronic jaundice, too, often indicates malignant disease, and not only do patients with cancer bear operation badly, but when jaundice is associated with it there is a tendency to persistent oozing of blood from the wound.

Dr. Osler, of Baltimore, in an interesting paper, states the combination of the following symptoms is characteristic of gallstones in the common duct, and is therefore invaluable in distinguishing between that form of obstruction and malignant tumour:—(1) Jaundice of varying intensity deepening after each paroxysm, which may persist for months or even years. (2) Ague-like paroxysms, characterised by chill, sweating, and fever, after which the jaundice usually becomes more intense. (3) At the time of the paroxysm pains in the region of the liver, with epigastric disturbance.

Diagnosis.—The several ailments which may produce attacks of pain in the right side of the abdomen are hysteria, acute dyspepsia, appendicitis, right renal colic, neuralgia, malignant growth in or near the liver, obstruction of the pylorus, and lead colic. The diagnosis chiefly rests on acute paroxysms of pain starting in the right hypochondrium and radiating thence across the abdomen and through to the region of the right shoulder, the attacks being accompanied frequently by vomiting or collapse, and sometimes followed by jaundice. If jaundice be persistent the presence of malignant disease may be suspected. If, however, it be dependent on gallstones, ague-like attacks will probably be present. In gallstones usually, marked tenderness will be found on pressing the finger deeply over the region of the gall-bladder between the ninth costal cartilage and the umbilicus. Pain in the so-called spasms may be referred to the left side, thence radiated to the left infra-scapula region. In hysteria the irregularity of the attacks, their association with other neurotic phenomena, together with the absence of physical signs of gallstones, will enable us to come to a correct diagnosis. In acute dyspepsia with flatulency, the relief following on simple treatment, the pain being over the stomach rather than over the gall-bladder, and the absence of serious symptoms will be a guide. In appendicitis, the presence of a swelling in the right iliac fossa or near it, and the absence of pain in the region of the right shoulder will be of assistance. In right renal colic, the associated bladder symptoms, together with the character of the urine and the pain shooting into the right groin and testicle, will be distinctive. In lead colic, the presence of a blue line on the gums, the more or less persistent "stomach ache," and the absence of the usual gall-bladder symptoms will usually assist. In pyloric obstruction, if accompanied by adhesions, the symptoms are not unlike that of gallstones. The presence of a dilated stomach, the characteristic vomiting, the pain in the left of the abdomen, and the absence of the characteristic gall-bladder pain will usually help us. In malignant disease, the absence of pain and tenderness, or if pain be present, its continued character, the gradual loss of flesh and the failure of strength usually indicate the nature of the affection, the persistence of jaundice when once it appears, and the absence of ague-like attacks afford landmarks which, as a rule, prove true guides. But in many cases gallstones exist together mith malignant disease, and then these symptoms become intermittent, though rapid wasting and loss of strength will often lead to a diagnosis of the existence of the two conditions.

As regards treatment, we may consider it under the headings: Preventive, palliative, and radical; the two former being medical, the latter surgical treatment.

The preventive treatment is chiefly a matter of diet, exercise, and general hygienic surroundings. In prescribing prophylactic measures one would recommend rational dress, cultivating regular exercise, warm baths, fresh air. In giving directions for diet, the patients may be told to partake sparingly of sweet and starchy food and rich dishes, which tend to produce dyspepsia, and alcohol should only be moderately used. Dr. Lauder Brunton gives some valuable hints for treatment, and shows how the system of dieting adopted at certain watering places, combined with exercise and the administration of diluent beverages, has very beneficial results. Mayo Robson says he has been accustomed for some years to recommend his patients to drink a tumbler full of the natural Carlsbad water before breakfast and a tumbler full of simple hot water before other meals. He thinks, no doubt, too little water is taken, and the stagnant bile and mucus deposited, if not removed, will tend in the long run to form concretions, just as drains if not flushed from time to time will become blocked by the deposit of solid matter. Alkaline saline waters act beneficially by stimulating the peristalsis of the digestive tract and increasing the flow of blood to the abdominal organs. When gallstones have once formed, no medicine, so far as we know, can dissolve them, or produce any material benefit, except by way of palliation; and although numerous remedies have been vaunted as beneficial in the dissolution of gallstones, their advocates have argued as if the gallstones were in a test tube, forgetting, apparently, that no drug can reach them except in a roundabout way and in a diluted form; thus benzoic acid, benzoate of soda, salycilic acid, turpentine, ether, chloroform, and numerous other agents reputed to be beneficial can really have no material effect. I will not say, however, that rational medical treatment may not restrict the increase of gallstones already formed, or to prevent the formation of new ones, if the patient have the good fortune to get rid of those already formed. Dr. Brockbank, after allowing gallstones to stand in a one per cent. solution of various salts for 14 days and then weighing them, found that there had been no loss of weight, thus disposing of the supposition that these drugs have any solvent action on gallstones. A gallstone placed in pure olive oil, in two days lost 68 per cent. of its original weight, and then broke up into small pieces. With pure oleic acid, a similar result in a very short time took place. The effect of a solution of animal soap is remarkable. After standing a few hours in a 5 per cent. solution a gallstone becomes coated with a bluish white filmy material, and in time the solid matter becomes viscid. These experiments are interesting in view of the fact that the administration of olive oil is said to exert a curative effect on gallstones, but there is not the slightest evidence that the oil can reach the gallstone in the bladder; indeed the effect is doubted by some observers, and requires more direct proof before the fact can be accepted.

Mayo Robson states that he has tried olive oil in large doses in several cases and cannot say that he has seen any good results from its employment. The oil can be administered either by the mouth or by the rectum, in either case two or ten ounces daily. It is not readily taken except in food, and then it is apt to excite dyspepsia. During a gallstone attack, relief is urgently demanded; at times the drinking of a pint of hot water, especially if combined with hot fomentations over the region of the liver, will ease the pain. In many cases, however, the only satisfactory remedy is a morphia injection. After medical treatment has been fully and fairly tried and failed, I think that both surgeons and physicians will agree that while cholecystotomy is generally recognised as the operation to be aimed at in the treatment of affections of the bladder or bile ducts, it is often impossible to say what operation will have to be done till the abdomen is opened.

So long ago as 1733 Petit suggested the possibility of relieving the distended gall-bladder by puncture, and that stones lodged therein should be removed by lithotomy, but it was not until 1867 that the modern operation of cholecystotomy was first performed. The operator was Dr. Bobbs, of Indianapolis. The patient recovered.

The first successful operation in England was performed by Mr. Tait on August 23rd, 1879.

The indications for operating appear to be the following :—

In frequently recurring colic without jaundice, with or without enlarge ment of the gall-bladder.

In enlargement of the gall-bladder, even if unaccompanied by great pain.

In persistent jaundice when recurring pains render it probable that the cause is gall-stones in the common duct.

In empyema of the gall-bladder.

In peritonitis starting in the right hypochondrium.

In the case of abscess round the bladder or gall ducts, whether in the liver or under it.

In some cases where, although gallstones have passed, adhesions remain, and prove a source of pain.

In biliary or mucous fistula.

In some cases of jaundice with distenedd gall-bladder depending on some obstruction in the common duct.

Supposing a case to be a suitable one for cholecystotomy, and the gall-bladder and ducts can be cleared by means of forceps and fingers, the opening may be sutured with a double row of sutures and the gall-bladder dropped back into the cavity. If the ducts cannot be cleared, the stone may be crushed in place by means of the finger and thumb, or by padded forceps. I have successfully performed this operation, and think it preferable to the more difficult procedure of incising the ducts or of fixing the gall-bladder to the intestine. Choledochotomy, or incising the duct, the incision being afterwards sutured, is another method of dealing with this trouble. This is usually difficult on account of the depth of the parts to be sutured. A drainage tube should, in these cases, always be inserted into the right kidney pouch, and if a transverse incision be made and the tube brought out below this the drainage is so effective that even if the stitches fail to close the wound in the duct, there will be little fear of extravasation. Cholecystenterostomy, or the making of a junction between the gall-bladder and the intestine, is easily effected if the gall-bladder be dilated, but is difficult if it be contracted, as is frequently the case. Murphy's button will usually be found to be the best method of accomplishing this. The daily injection of fluids, after an interval of some days, through the cholecystotomy opening will either soften or dissolve the concretions. Cholecystectomy, or excision of the gall-bladder, is seldom necessary as a primary operation. It may be required as a secondary operation in cases of stricture of the cystic duct, the common duct being free.

In cases where it is impossible to bring the margins of the gall-bladder into the wound, and where it is not considered advisable to completely close the incision into the gall-bladder, a tube of omentum can be made. I myself find a vertical incision along the upper part of the right linea semilunaris gives ample room, but if required I should not hesitate to get further room by a transverse cut in addition. Suture of peritoneum fascia and skin by separate stitches effectually guard against ventral hernia if the patient be kept in bed for four weeks.

One important point in connection with this operation appears to me not to be definitely settled as yet, and the practice of surgeons seems to differ considerably. I refer to the treatment of the incision in the gall-bladder. Some surgeons invariably stitch the incised edges to the skin or parietal peritoneum, while others more frequently close the incision and drop the gall-bladder back into the cavity. My own practice has been on all possible occasions to follow the latter method. Three cases in my own experience recently came into my mind where, after suturing the gall-bladder to the parietes, a troublesome fistula persisted for many months. Indeed, in one case, in spite of the secondary operation, the fistula still persists. I think in all cases where the common duct is found to be patent and the walls of the gall-bladder fairly healthy the best method is to close the incision at once. In a few cases no doubt we find the gall-bladder so matted together by adhesions and shrunken as a result of chronic inflammation, rendering it practically functionless. It is impossible to bring the edges to the surface, and yet one feels hardly safe in closing it. In these cases I think it is justifiable to remove the gall-bladder entirely. In one of my cases recently I followed this procedure, and the patient, after an uneventful convalescence, made a good recovery. This is a point on which I think expressions of opinion and the experience of others would be valuable.

POST-OPERATIVE HÆMATEMESIS.

By W. J. Stewart McKay, M.B., M.Ch., B.Sc., Senior Surgeon, Lewisham Hospital for Women and Children, Sydney.

HÆMATEMESIS has been observed to follow ovariotomy and other abdominal operations. I have notes of seven cases in which this has occurred at the Lewisham Hospital.

In the first case the patient was a very stout woman, aged 51 years, on whom abdominal hysterectomy had been performed. Twenty-one hours after the operation "black vomit" set in, and continued at intervals for seven hours, then bright red blood was vomited at intervals during three hours. After this there was dark brown vomit and occasionally red vomit, and then the vomiting ceased. The red and black vomit continued altogether for 18 hours. The patient recovered.

The second instance was after a section for double pyosalpinx. There was a small quantity of blood and much black vomit during the first 24 hours. The patient recovered.

The third case was one of appendicitis in a boy who had been ill for a month before the operation. He had well marked peritonitis. The abscess was opened and drained, and next day he vomited a half-ounce of bright red blood. He died in a typhoid condition two days later.

The fourth case was one of pelvic abscess, which died after a cœliotomy on the fourth day from peritonitis. She vomited blood for a short time on the second day.

The fifth case was a woman, aged 46, who had suffered with chronic indigestion for six months. She felt some abdominal pain, and when I came to examine her found a fulness just over the pubes. This increased so rapidly in size that 48 hours later the swelling had reached the umbilicus. On the abdomen being opened, free fluid was found in the peritoneal cavity, and peritonitis was present. Two ovarian cysts were removed, both being soft and œdematous. They were malignant growths. Eighteen hours after the operation she vomited several ounces of black fluid. When examined in a porcelain dish the fluid was found to be as black as very strong coffee. When the dish was tipped up, a sediment composed of a fine brown granular matter, intermingled with short, thin, brown fibres, about six millimetres in length. Under the microscope the fluid was found to be composed of a brown granular material, intermingled with which were red blood corpuscles. The patient vomited the dark fluid several times.

Death took place 40 hours after the operation, and an autopsy was conducted a few hours after death. The bowels were not distended, and were not adherent, but there were traces of localised peritonitis that had been present at the first operation. The stomach was divided into two compartments by a malignant growth which had commenced on the posterior wall of the stomach. On opening the viscus about two ounces of the dark fluid was found, and the walls of cardiac compartment were found to be studded with numerous small bright red spots, due to dilated capillaries. There was no ulceration, but there were two intensely injected areas, the size of a shilling, close to the ring formed by the growth. Death was due to exhaustion, aided perhaps by the peritonitis, which had not progressed, but showed signs of retrogression.

The sixth case was one of appendicitis. The boy, aged ten years, was very ill at the time of the operation, the appendix being gangrenous. Three weeks after the operation, when the boy was convalescent, he had a violent hæmorrhage from the stomach, and vomited at least a pint of bright coloured blood. He recovered.

The last case was after operating for ascites, due to cirrhosis of the liver. The patient vomited over a pint of blood within 24 hours of the operation. She recovered.

Mayo Robson, Winslow, Mansell-Moullin, Von Eiselsberg, Rodman, Halliday Croom, Cronin, and others have published observations on this subject.

Mayo Robson says that he has seen capillary hæmorrhage from the stomach follow operations for intestinal obstruction, tuberculous peritonitis, cholecystotomy, choledochtomy, hernia, ovariotomy, and simple exploratory laparotomy.[1]

Von Eiselsberg has reported eight cases of post-operative hæmorrhage from the stomach and duodenum, some of these being after abdominal operations. In one of his cases the patient was a fat woman, aged 59, who had a strangulated umbilical hernia; radical operation performed, hæmatemesis second day; recovery. In another case of strangulated umbilical hernia in a very fat woman of 60 years, numerous hæmorrhages were noticed in the mesentery. Hæmatemesis occurred the night after the operation. Recovery. In a man aged 42, the operation was for strangulated hernia; the omentum was deeply ecchymosed. He vomited over a pint of blood on the second day, and death occurred shortly afterwards. Recent ulceration of the duodenum and stomach was found at the autopsy. In two of Von Eiselsberg's cases no blood was vomited, but it was found in the stomach and intestines.

Winslow[3] operated on a stout woman, aged 65 years, for umbilical hernia. Death occurred from profuse gastrorrhagia on the third day. The autopsy showed no vascular lesion of the stomach whatever.

Profuse hæmatemesis occurred in a young man, aged 23, operated on by Mansell-Moullins, who had only made an exploratory incision in the left iliac fossa. Death took took place in 48 hours.

Occasionally the hæmorrhage occurs into the intestinal canal instead of into the stomach. Howard Kelly mentions three cases, one of which occurred in his own clinic.

Etiology.—Von Eiselsberg tried to explain this post-operative hæmorrhage as a result of injury to the omentum, as in several of his cases the omentum had been ligatured, or there had been torsion of the omentum. He thinks that thrombosis of the omental vessels occurs after ligature or after injury, and this is followed by embolism in the wall of the stomach, and ulcers are then formed. It is interesting to notice that laceration of the mucous membrane of the stomach from the dragging of an omental hernia has been reported by Rokitanski, while twisting the omentum may cause multiple gastric hæmorrhages.

In the fifth case related above I noticed at the time of the operation that the omentum could not be found, and at the autopsy it was seen to be only a very thin fold stretching between the stomach and the transverse colon. Therefore in this case injury to the omentum played no part in the hæmorrhage, for it was not interfered with during the operation.

General anæsthesia has been advanced as a cause, but Mayo Robson points out that he operated on a gall-bladder, under cocaine, simply exposing it through a small incision, yet violent hæmatemesis set in the day after the operation.

Sir Halliday Croom considers that most cases of hæmatemesis after abdominal operations are due to sepsis.

Rodman, in his oration before the American Medical Association, June, 1900, advanced the theory that sepsis is the cause of these hæmorrhages, but in answer to this, cases have been examined—post-mortem—that showed no signs of sepsis whatever. In our seventh case sepsis was absolutely absent.

Violent vomiting may have some influence, but the hæmorrhage may occur though there may have been no vomiting after the operation. (Two cases reported.)

Kehr asks the question: Is it alcohol, chloroform, or arterio-sclerosis which plays the leading rôle in this ominous vomiting of blood?

Mayo Robson considers that post-operative hæmatemesis was not generally recognised until he drew attention to it in his Hunterian lectures. Its occurrence has long been known. I find that Wilson Fox[4] thus alludes to it:—"In other cases, though probably referable to the same source, its mode of origin is less explicable, as when it follows severe surgical operations"; and in a note to this he says: "A case of this nature was communicated to me by my friend and colleague, Mr. Berkeley Hill, when, after an operation, severe hæmatemesis occurred, for which, after death, no cause could be discovered. Sir W. Jenner informs me that he has seen similar instances." In Spencer Wells' twenty-sixth case, he notices that on the day following the operation that "the sickness did not abate. She continued to throw up large quantities of coffee-coloured fluid, and gradually sank, exhausted, in the afternoon of the second day after operation." The post-mortem showed nothing but turbid serum in the peritoneal cavity. "It was clear that death took place from exhaustion, partly the result of the uncontrollable vomiting.' I have quoted this case from Wells because I consider that the black vomit met with after cœliotomy, whether on the first day or at a later period, is due to hæmorrhage, and consequently hæmatemesis, far from being an uncommon occurrence, has been in the past, and now is, a frequent complication, and I consider that the following considerations may throw some light on the subject.

Hæmatemesis may occur as a complication of a large number of affections—scurvy, yellow fever, cholera, cirrhosis of the lung, vicarious menstruation—without any lesion of the lining membrane being discovered after death, consequently we need not imply for one moment that post-operative hæmatemesis means that the patient's stomach is ulcerated. On the other hand we cannot so readily admit that because to the naked eye at the autopsy no lesion can be discovered, that *none is present*, as Brinton long ago remarked " that amongst the myriads of these minute tubes present, the eye fails to detect the exact vessel or vessels involved in the lesion, is of course not very surprising."[5]

Mansell-Moullin[6] was called upon to operate on a case for hæmatemesis. " The very small bleeding point was found in the posterior wall of the stomach, near the pylorus," and he remarks that "it was a mere erosion, and did not deserve to be called an ulcer, and I cannot help thinking how easy it would have been to have overlooked it altogether if the inspection had been made after death, when there was nothing escaping from it to act as a guide."

Beach has reported a case where, after opening the stomach and clearing out the clots, he perceived that the blood oozed from a large part of the inner lining as it might from a granulating surface. It was easily stopped by pressure, but as soon as the pressure was removed the oozing began again.

We may then grant that blood may escape from the mucous membrane of the stomach without discoverable lesion being present, the corpuscles escaping by diapedesis. I would suggest that the chief cause of hæmatemesis after cœliotomy is shock, which acts through causing a portal congestion. If we consider Robson's and Eiselsberg's cases we shall see that while some had general anæsthesia, some local anæsthesia, some had sepsis, others in which this was absent; some in which the gall-bladder was operated on; others in which the uterus, tubes, omentum, and other abdominal organs manipulated; that the only one feature common to all is shock. And this acts in the following way: any abdominal operation causes a reflex dilatation of the abdominal vessels, and an over-filling of the abdominal veins. Now, the blood supply to the stomach is so arranged that a large number of very slender arteries start up from the larger vessels in the submucosa, and as they run between the glands they break up into very fine capillary vessels, and then end in a much coarser capillary network around the mouths of the glands. The veins that collect the blood from the capillary network are fewer in number, though of far greater diameter when compared to the arterioles. It follows from this arrangement of the vessels that anything that tends to cause an obstruction to the outflow of the blood in the veins leading from the stomach will tend to cause the coarse capillary network surrounding the mouths of the glands to become dilated. Now, in abdominal shock the liver[6] and the superior mesenteric veins, as well as all the other veins leading to the liver, are engaged with blood, and this necessarily hinders the emptying of the gastro-epiploica dextra and other veins coming from the stomach.

Thus we have produced a condition of partial obstruction which leads to a venous congestion of the walls of the stomach, and so to a diapedesis and an exudation of fluid into the stomach.

Kehr in one of his gall-bladder operations was unable to perform cystostomy. The parts of the lower border of the liver on either side of the gall-bladder was carefully sutured to the parietal peritoneum, after which gauze was placed along the gall-bladder. During the first 24 hours after the operation the patient vomited much blood. Kehr remarks that " we have not infrequently seen these disturbances of the circulation of the portal system after operation upon the liver and bile system. We at first believed that the cause was to be imputed to the tampon upon the choledochus or vena porta. Yet we saw it in cases in which a tampon was not employed."[7]

Now, since I drew up this paper I have had a case which confirms my theory. I was asked to operate on a woman who was much distended with dropsy. On opening her I found the liver had shrunk to a mere ball. I fixed the omentum to the abdominal wound and placed her back in bed, and I predicted that she would most probably have hæmatemesis. The prediction was amply confirmed.

She vomited at least a pint of blood 24 hours after the operation. Why? Already the venous blood would not flow through the portal vessels on account of the extreme cirrhosis; when then the shock of the abdominal operation followed, the veins of the abdominal viscera became still further distended, and we got the predicted hæmatemesis.

Now, I maintain that portal congestion is one of the most characteristic effects of septic peritonitis, and thus the black colour of the vomit so characteristic of peritonitis, when death is approaching, is due to diapedesis of blood corpuscles; and the reason why we get black vomit on the first day after some sections is to be explained by the fact that at the time of the operation the portal congestion is already present, being due very very frequently to peritonitis.

It may be urged that if shock is the chief cause of post-operative hæmatemesis, then we should have other complications more often after operations other than cœliotomies.[8] But our answer to this is that while we get shock after other operations, it is chiefly in *abdominal* operations that we get this disturbance of the portal circulation; and Crile and others have laid some emphasis on the fact.

As, however, we do not get hæmatemesis in every case of shock after cœliotomy, we may grant that shock and an altered portal circulation are not sufficient to account by themselves for all cases of hæmatemesis, and we may therefore suppose that in some cases there must be some predisposing conditions present, and these conditions may be either local or general. Such conditions would be ulceration of the stomach or duodenum, or, if ulceration be absent, some breach in a vessel wall. Of the general conditions we know less, but if we are to regard the black vomit that occurs during peritonitis as due to the escape of black corpuscles from the vessels, then septic peritonitis is to be regarded as one of the most important conditions that predispose to hæmatemesis, and we must suppose that the inter-cellular or cementing substance of the endothelial cells undergoes a change and more readily permits the corpuscular elements of the blood to pass through.

"It must not be supposed that hæmorrhage by apoplexy (or rupture) is always large, or hæmorrhage by diapedesis always small. A rent in a capillary or a vein will give rise to no great loss of blood; while the hæmorrhage, from long-continued diapedesis may reach an alarming magnitude. In a given case it is often by no means easy, often indeed quite impossible, to decide whether hæmorrhage has occurred by rupture or by diapedesis." (*Ziegler.*)

Mayo Robson has said "that the only explanation that seems at all feasible is that the hæmorrhage is dependent on a reflex nervous influence."

I would say that the hæmatemesis that follow cœliotomy is due to shock, which leads to an alteration in the circulation of the abdominal vessels, which results in a venous congestion in the gastric walls, and this leads to a rupture of the capillaries or a diapedesis of the blood corpuscles; and this escape of blood is favoured by local condition such as ulcer, or by a general condition such as sepsis.

Symptoms.—The patient may begin to vomit blood soon after the operation or not until some days have elapsed. In one of our cases (the sixth) the patient did not vomit until three weeeks after the operation.

If the amount of blood that escapes is large, then the blood vomited may be bright in colour, but if the amount is small, and it has remained in the stomach for some little time, then the gastric juice acting on the corpuscles break them up, and the hæmatin is the cause of the dark "coffee-grounds" that is vomited. In one of the cases in which I examined the dark fluid just after it had been vomited, it was so black that when held to the light in a glass it was quite opaque.

In the case that I have observed the amount of blood vomited has only been alarming in two cases, but in some of the cases that have been reported the blood has been vomited in such large quantities that the patient has died of collapse.

Prognosis.—The prognosis is grave in all cases where post-operative hæmatemesis is present.

Mayo Robson lost a case on the third day, on violent hæmatemesis having set in the day after the operation.

Mansell-Moullin's case died within 48 hours, though the operation was only a simple exploratory incision in the iliac fossa.

Winslow's case died on the third day after the operation.

Reichart performed a cholecystenterostomy and this was followed by hæmatemesis on the sixth day, the patient dying two days later.

Kehr remarks that the prognosis is good in the cases in which the pulse remains strong.

Sir Halliday Croom has recorded ten instances of this complication, and eight of his patients died. He remarks: "I have no hesitation in saying that in abdominal section at least hæmatemesis is one of the most serious complications which can occur."[9]

Treatment.—Tripier recommends high injections of hot water at a temperature of 112° to 116° F., and these have been employed with success in some cases.

Free purgatives with calomel may be tried, and small doses of the tincture of the perchloride of iron or hazeline may be administered, but these must not be persevered with if they cause increased vomiting.

I should recommend the administration of suprarenal capsule with chloretone, or 10-minim doses of adrenalin every hour for three hours.

Morphia may be injected into the epigastric region, and ice may be applied to the region, while a flannel wrung out of mustard water may be wrapped round the patient's feet.

The patient should be fed by the bowel and given nothing by the mouth, except a little ice to suck or a few spoonfuls of ice-cream. Chloride of calcium may be tried by the bowel in large doses. Kehr washed out the stomach with saline, but thinking that that dissolved the clots in the mouth of the vessels, he employed nitrate of silver.

Reichart operated on two cases of post-operative parenchymatous hæmorrhage, and both cases died. Mayo Robson remarks: "If such cases, owing to persistence, seem to call for operation, then gastro-enterostomy, by securing complete physiological rest, would seem to offer the best chance of success."

I myself think that any operative interference is quite out of place; for any operation would only further increase the venous congestion of the stomach, by increasing the already existing condition of shock.

(Read before the New South Wales Branch of the British Medical Association.)

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DEGENERATION OF UTERINE MYOMATA.

By Ralph Worrall, M.D., M.Ch., Gynæcologist to the Sydney Hospital.

I HAVE seen during the past 18 years a large number of instances of degeneration of myomata. Recently several coming together led me to think that it might not be without interest and profit if I were to bring the subject before the Branch.

CASE 1.—Miss C., 51, consulted a leading Sydney surgeon 13 years ago for a tumour associated with profuse menstruation; was told by him it would disappear at the change of life. It steadily increased in size so that seven years ago she consulted another leading surgeon, who gave the same opinion. The change of life came on three years ago, and up to six months ago the tumour remained stationary. Since then there has been a rapid increase in size, accompanied by great weakness, emaciation and dropsy. P.C.: Greatly wasted; pulse thready; temperature 100 deg.; tongue dry; anasarca of legs and hydroperitoneum associated with a large, hard, irregular tumour, which obliterates the cervix and depresses the vaginal vault. The cutaneous veins of the abdomen are enlarged; the urine albuminous. I advised against any operation on the ground that the patient was evidently dying. Three days after the friends called and said the patient was in great suffering, and implored me to operate. Abdominal hysterectomy was performed, the ascitic fluid sponged away, and the abdomen closed without drainage. There was considerable adhesion to the pelvic peritoneum. The patient was greatly relieved for a fortnight, then the abdomen began to fill again, and a mass formed in the liver which almost daily enlarged, and the patient died exhausted but without suffering in three weeks. Dr. Jamieson pronounced the growth a mixed celled sarcoma.

CASE 2.—Jane H., 47, single, complains of almost constant uterine hæmorrhage for past three years, and of a gradually enlarging abdominal tumour. P.C.: Very anæmic; pulse weak. A smooth elastic tumour reaches from pelvis to three inches above umbilicus. Abdominal hysterectomy difficult owing to the soft pultaceous character of the growth from myxomatous degeneration and hæmorrhage into its substance, also from deep pelvic subperitoneal burrowing. Patient made a good recovery. Although macroscopically the tumour appeared to be malignant, yet histological examination showed it to be an example of extreme myxomatous degeneration. My colleague, Dr Armstrong, operated in this case for me, as I had a poisoned finger at the time.

CASE 3. —A. H., 44, multipara. Last child 13 years ago. Complains of menstruation lasting for several months at intervals during the past two years, and of a lump in the right groin for about a year. P.C.: Pale, thin, pulse weak. Lower abdomen occupied by a prominent, irregular tumour reaching nearly to the umbilicus. Abdominal hysterectomy. Easy recovery. The tumour is a beautiful specimen of myxomatous degeneration of a myoma in the posterior wall of the uterus.

CASE 4.—Elna E., 27. Fibroid polypus removed five years ago. Four years ago was operated on for ectopic gestation. Complains of almost constant hæmorrhage for past two years. "Has had the womb painted with iodine every five days for some months past" (with what object I cannot imagine). P.C.: Looks very ill; quite blanched. Uterus the size of a three months' pregnancy. Abdominal hysterectomy. The specimen consists of a greatly enlarged uterus containing a submucous myoma undergoing myxoid degeneration. Patient made an easy recovery.

CASE 5.—R. H., single, 43. Had a severe attack of peritonitis 18 months ago lasting over a month. An abdominal tumour was discovered by the doctor in attendance at that time. A year ago consulted a Sydney surgeon, who advised against operation on the ground that "the tumour would probably disappear at the change of life." It has, however, rapidly increased in size for the past few months. Menstruation lasts 14 days, and is very profuse. P.C.: The abdomen is occupied by a tumour reaching to within three inches of the ensiform cartilage. The hymen is normal; the vaginal vault is markedly depressed on the left. Abdominal hysterectomy. Considerable time taken up in ligaturing extensive parietal and omental adhesions. The vessels in the omentum chiefly nourished the largest sized outgrowth, and were of great size. This outgrowth was connected with the main mass of the tumour, which is a multinodular myoma, by a narrow pedicle which had undergone axial rotation three times from left to right; the interference with the circulation thus produced had brought about the attack of peritonitis; what Dr. Clubbe the other day called "the ever watchful omentum" sealed itself to the tumour, took up the work of nutrition, and thus averted its necrosis and the death of the patient. On section this outgrowth presented a large softened area resembling brain tissue, and suggestive of malignant change, Dr. Jamieson, however, reports it to be a necrobiosis from the above-mentioned impeded vascular supply. The peritoneum contained a considerable quantity of free ascitic fluid. This case is interesting as showing one of the modes of origin of the peritonitis which not uncommonly complicates myomata.

CASE 6—E. M., single, *æt.* 36, complains of severe pains in lower abdomen for four months and of a tumour there, increasing. Abdominal section. Hystero-myomectomy, with removal of appendages; the right ovary being transformed into a multilocular cyst the size of a pear. The tumour is a sessile outgrowth from post wall of the uterus; on section its centre contains a large focus of calcareous degeneration.

I present photos, kindly taken for me by Dr. Herschell Harris, of these and other tumours undergoing degeneration or the seat of hæmorrhages. One I have already brought before the Branch as an example of a giant tumour transformed into one huge cyst containing two gallons of turbid fluid and weighing 38 lb. The case is referred to in Macnaughton Jones' last work.

Case 4 illustrates the considerable danger which attends the operation of curettage for uterine myoma, for had that operation been carried out in this instance the capsule of the submucous degenerating tumour must have been injured, with consequent sloughing of the tumour and probable death of the patient from sepsis. I have seen this actually occur some years ago, so that it is a mistake to recommend curettage for myoma as an operation, "which may do good and at all events can do no harm."

It should be remembered that the blood supply of these tumours is derived from their capsule, and that they are extremely susceptible to traumatism and infection from abortion or full term labour (in both of which, complicated by myoma, there is apt to be retained secundines or placental tissue) or adherent bowel or bladder.

I do not intend to take up your time by an account of all the degenerations to which myomatous tumours are liable. These may be read up in any text-book, and every student is familiar with them; but what every medical man does not seem to recognise, and what the text-books do not sufficiently emphasise, is the comparative frequency of deterioration of the general health in these cases from resulting anæmia, cardiac change and renal destruction, and from degenerations and infections of the tumours themselves. That these untoward results are comparatively common the cases and exhibits which I bring forward to-night go to prove; 15 per cent. of the myomata removed by myself during the past three years were undergoing degeneration of one kind or another. Some authorities assert that malignant degeneration does not occur; that this is erroneous Case No. 1 indisputably proves, and I have seen several others equally clear in disproof of the statement. It should be remembered also that although histologically a tumour of the uterus may be benign, yet clinically all these degenerating tumours are malignant in so much as they kill the patients as surely as if they were, although perhaps more slowly.

In the classical paper by Charles Noble, read before the British Gynæcological Society, based upon 218 cases of myoma, his conclusion was that in one-third the result must have been inevitable death without operation. Against this one must balance the mortality rate by operation. In my own practice I have had one series of 24 consecutive recoveries, another of 29 consecutive recoveries, and another of 18, the latter still unbroken. Other surgeons have published even better results. The mortality rate by operation may therefore be set down, I think, at from 2 to 10 per cent., and as this is less (some writers say only one-third) of the mortality caused by the tumours unoperated upon, the case for operation in all cases of myoma, which are *increasing or causing symptoms*, seems to me unanswerable, even without taking into consideration the suffering and invalidism produced by tumours which may not endanger life.

(Read before the New South Wales Branch of the British Medical Association.)

The Food Test Commission at Washington, appointed by the Government of the United States, declares that the use of salicylic acid in food is seriously injurious to health.

A CASE OF POPLITEAL ANEURISM.

By H. S. Newland, M.S., F.R.C.S., Adelaide.

THE treatment of popliteal aneurism must always be, for many reasons, a matter of great interest to the practical surgeon. It is the aneurism with which he most commonly meets. It is very variable in its severity, so that the remark which has been applied to all forms of the malady is peculiarly fitting here. "Some aneurisms so tend to cure themselves that very slight artificial assistance suffices to induce their solidification; others obstinately resist one effort after another, and the cure, when at last effected, may destroy the vitality of the parts beyond." It is open to every mode of treatment which has been applied to the cure of aneurisms, each and every method having been employed successfully and otherwise. Nor is historical interest wanting. It is the first important aneurism in which Anel's method, and the first in which the Hunterian, the flexion, and Reid's method (Esmarch's bandage) were employed. It is with the object of showing how applicable under modern aseptic conditions the treatment devised by Antyllus in the fourth century is to popliteal aneurisms that I have brought this case to your notice to-night.

C.M., aged 42, formerly a valet but now a baker, consulted me on September 7th of this year for a swelling behind the right knee which he had noticed for three weeks. Since his attention had been directed to it the swelling had not increased in size. He complained of a throbbing, aching pain in and behind the joint, which he was unable to bend as freely as formerly. For two weeks the leg below the knee had been swollen. His work never involved heavy lifting, but he has a reputation for having worked very hard. He has always enjoyed good health, and denies any venereal taint. There is no history of alcoholic excess. His father was a soldier. No member of the family appears to suffer from, or to have died of arterial disease. The patient is a small, spare man, whose excitable disposition tends to make his answers at times meaningless.

On inspection, the contour of the right knee presents an abnormal convexity, which pulsates visibly. The swelling is smooth, with ill-defined margins, and more than fills the popliteal space. In a vertical direction it measures about 3½ inches. On the inner side the pulsation extends as far as the most prominent point of the internal condyle. The posterior margin of the ilio-tibial band forms the external boundary. The pulsation is superficial, forcible, and uniformly present over the swelling. Fluctuation is easily obtained. Manipulation is accompanied by slight tenderness. When the femoral artery is compressed, the tumour shrinks, and direct pressure leads to a further diminution. When the vessel is released, the swelling regains its size in two or three beats. A systolic and a diastolic bruit are present, but no thrill can be detected. The superficial veins around and below the knee are full. The skin of the leg is œdematous and shining, with a blush above the ankle. Neither the posterior nor anterior tibial pulse can be felt. There are no signs of nerve pressure. No fluid is present in the knee-joint. The glands in the right groin are slightly larger than their fellows.

A skiagraph shows a large spherical opacity behind the knee-joint. The pulse is 80, regular, fair volume, collapsing in character. The brachial artery is slightly thickened. The respirations are 16; the temperature is normal; the pupils are equal and react. I omitted to observe the vocal cords. The apex beat of the heart is in the fifth left space, 4¼ inches from the mid sternal at line; it is not heaving. The cardiac dulness extends out to this point. It extends upwards behind the sternum as far as the first rib, and on each side of the sternum above for about ½ to ¾ of an inch. An aortic systolic and an aortic diastolic bruit are present. Tracheal tugging cannot be obtained. The screen and skiagraph show an opacity in the situation of the ascending aorta. The abdominal viscera appear to be healthy. It was obvious that the patient had an aneurismal dilation of the ascending aorta and a popliteal aneurism. Before deciding on the treatment of the latter condition it was necessary to consider its anatomy.

The large size and rapid growth seemed to point to its origin from the back of the artery. Arising in this situation, aneurisms can grow fast and attain a large size owing to the slight resistance offered by the yielding tissues of the ham. The healthy condition of the joint also favoured this origin, and the artery could not be felt superficial to the aneurism. The ill-defined boundaries, the presence of fluctuation, the superficial pulsation, and finally the almost complete disappearance of the aneurism when the arterial flow was arrested and direct pressure made, indicated that the walls were thin and the contents chiefly fluid. The fulness of the veins and the œdema pointed to considerable pressure on the popliteal vein. The thin covering over the prominence showed that rupture could not long be postponed.

The collateral circulation was probably well established. The absence of the tibial pulses indicated this. With these anatomical data before me, I decided that it would be best to attempt to excise the sac.

The inevitable result if the condition were allowed to progress was pointed out to the patient, and his friends were warned that the thoracic disease might lead to sudden death during an operation. Nevertheless, operation was strongly advised, and the advice was readily accepted.

On September 16th, gas and ether, followed by chloroform, were administered by Dr. Cudmore, and were well taken. The leg was elevated for a few minutes, and an elastic tourniquet applied round the thigh. A vertical incision 3½ inches long was made rather to the inner side of the swelling. The external saphenous vein was immediately encountered, coursing over the outer side of the aneurism to its termination. The inner half of the sac was next easily stripped from the adjacent structures. In shelling it out above, the sac was torn. It was, therefore, laid open, and the contents, which consisted of recently coagulated blood, were evacuated. No laminated clot was present. The interior looked like that of an adventitious capsule of a hydatid. The popliteal vein with the internal popliteal nerve lay to the outer side of the sac, the former being intimately fused with it. After some difficulty the popliteal artery was freed from the vein above, ligatured with No. 0 silk, and divided below the ligature. The inner half of the sac was now excised. The efferent artery was tied after the removal of the tourniquet. Those portions of the sac which were adherent to the popliteal vein and the posterior capsule of the knee-joint were not interfered with. A rubber drainage tube was inserted, and the wound closed with silkworm gut sutures. A stitch was inserted but not tied at the site of the emergence of the tube. The wound was dressed with plain sterilised gauze, and after being well wrapped in cotton wool the limb was bandaged on to a back splint with a foot-piece and moderately elevated. The circulation speedily returned when the tourniquet was removed. The toes were a little cold on the afternoon of the operation, but sensation was present. Next day they were quite warm. The tube was removed at the end of 48 hours and the suture was tied. There had been considerable oozing.

The patient experienced no pain at the site of operation; the wound ran an aseptic course, and the stitches were removed on the eighth day. Small patches of dry gangrene appeared on the sole and heel owing to insufficient padding and the unpardonable temporary omission of a heel pad.

Three weeks after the operation the patient could move his knee to nearly its full range, and without pain. The patches of gangrene have recently separated. Their occurrence is a blemish on an otherwise successful case.

In no other form of treatment could the cure have been so speedy, so certain, and so painless.

It will be observed that the method I adopted differs slightly from that introduced by Antyllus, and performed exclusively until the introduction of Anel's method in 1710.

He says: "If it be an aneurism by dilatation (fusiform) we make through the skin an incision in the direction of the artery and separate its lips by means of hooks; then we divide all the tissues that lie between the artery and the skin. We separate the veins from the artery with blunt hooks, and so we uncover all the dilated parts of the artery; then we pass under it a probe with a rounded end and raise up the tumour. After that we glide along the probe a needle armed doubly with thread, cut the thread close to the needle, so that there are two threads and four ends. These are then tied, the one above the other below the dilatation. We afterwards open the tumour by a little cut on its middle, so that all its contents may be evacuated without danger of bleeding. But this manner of separating the artery and isolating the aneurism is difficult, and often the force and power of the pneuma drives off the threads (Owing to the use of the tourniquet in my case, previous ligature of the vessel was not essential to prevent hæmorrhage). If the aneurism originate in a vent of the artery, we grip in the fingers so much of the aneurism as we can, together with the skin, and we pass under the part so held a double thread, either of flax or of tendon. After pushing through the cord we cut it close to the needle, so as to leave two strings. These are tied above and below the tumour, which is incised and evacuated, its greater portion except that included in the thread being removed, together with the skin; and thus," he naively adds, "it is done without bleeding."

The procedure which most writers on aneurism call the old system, and wrongly attribute to Antyllus, is entirely different, inasmuch as in the method still occasionally practised, and which Mr. Syme tried to revive, the sac is opened before tying the artery, which is sought for from within. It was his custom to clear away the clots, stuff the wound with lint, charpie or tenax, and leave it to suppurate or to slough. In this aseptic age, thanks to Lister, we do not leave our operation wounds to suppurate or to slough. We can now excise an aneurism and be sure of primary union. I believe it is necessary to carefully review the treatment of aneurisms of the extremities, and I am convinced that when the facts in its favour are marshalled, surgeons will be more and more inclined to adopt the treatment of aneurisms of the extremities on the lines I have indicated.

(Read before the South Australian Branch of the British Medical Association.)

ON LOSS OF MEMORY.

By M. McIntyre Sinclair, M.D. (Glas.), D.P.H. (Cam.), Wentworth Falls, N.S.W.

THE subject of this paper has been suggested by the simultaneous report in one of our Sydney daily papers recently of two most interesting cases of loss of memory. Aberrations of memory touch on the province of the psychologist as well as the physician; occasionally they may (as in one of the above instances) be the subject of intense medico-legal interest.

In the particular case referred to, a prominent witness, on whom the prosecution relied, completely broke down in the course of his evidence, and could recollect nothing of certain events very material to the case in hand. (Auburn murder trial, Sydney *Daily Telegraph*, April 8th, 1903.) The man's condition remaining unchanged on the following day, rendered it necessary for the presiding Judge to bring the trial to a close, and discharge the jury without returning a verdict.

The other case, curiously enough, is found in another column of the same issue, and as it describes succinctly an occurrence well recognised by medical men, I give it exactly as reported :—" An extraordinary case of loss of memory has occurred at South Melbourne. On Monday night two ladies walking in Park-street saw a well-dressed lady leaning against a fence, with her hand pressed to her forehead. The ladies questioned her, and as her replies revealed entire ignorance of her identity and surroundings, as well as great mental distress, they took her to the nearest shop, and communicated with the police. A constable conveyed her by tram to the local watch-house, where she was again interrogated without avail. The unfortunate lady, complaining of agonising pains in her head and chest, walked about the room, wringing her hands and piteously entreating to be told who she was. She fainted, and after some time she came slowly back to consciousness. As her eyes fell on Plain-clothes Constable Cobbledick, who had just come in, she gave a start of surprise. It afterwards transpired that she was acquainted with that officer, and the sight of him was the first thing that recalled her back to herself. Gradually her memory came back, and she remembered coming to South Melbourne to see her sister there, but her mind was a blank as to her subsequent movements. She was conveyed to her home in North Melbourne."

Similar cases to the above occur occasionally in the course of medical practice, and as the subject is one which had some attractions for me previous to embarking on my present sphere of work, I have endeavoured to gather together a few thoughts suggested by a perusal of the above two cases.

Defects of memory in persons apparently in the best of health are occurrences of everyday life, and as well known to the layman as the physician ; but apart from these we are aware of much more serious losses of memory resulting from either functional or organic disease. The loss of memory during convalescence from acute illness, loss of memory from nervous shock, from senile decay, from debilitating diseases such as diabetes or from actual disease of the brain and its membranes —these are all well-recognised types of the affection. It seems strange, indeed, at first sight that a person should, of all things, forget his or her own name, as in the case of the Melbourne lady reported above. As a matter of observation, however, we can assert that names of persons and things are actually the prime offenders in these tricks of memory, and philologists have long ago pointed out that to give a name to an object is one of the latest developments in the evolution of language, and therefore the one most easily lost.[1] To forget the name of a friend or a recent introduction is no uncommon event of everyday life. But to forget one's own name and address, even temporarily, seems almost to suggest something pathological; and alongside the case of the Melbourne lady we may put the case of the Russian Ambassador at St. Petersburg related by Crichton.[2] The Ambassador had had occasion to call at a house where he was not known to the servants. Wishing to give his name, he found to his consternation that he was not able for the moment to remember it, whereupon he turned to his companion and said to him, with much earnestness, " For God's sake, tell me who I am !"

A somewhat remarkable case of the same kind came under my own notice about four years ago, when a lad recovering from an attack of influenza suddenly lost all recollection not only of his own name, but of the names of his brothers, sisters, and relations. Out of a photographic album containing some 60 or 70 photographs he could not name a single individual; yet, by some periphrases, such as a description of their occupation, or residence, or peculiarities, it was evident he knew perfectly well whom the portraits represented. Curiously enough, he could write down the names of several and then by reading what he had written bring the names to recollection. He could also at once pick out the correct name of a person if he had heard it repeated amongst others. Having heard the name, he could remember it and reproduce it if required within the space of the following half minute ; after the lapse of about half a minute, however, the name had again passed into oblivion, and by no effort of will could he recall it to consciousness. The case was a peculiar one in other respects, which I need not describe here further than to say that for a time incipient insanity was feared. Ultimately, however, a complete recovery took place, and from a correspondence which I have kept up with the lad I am glad to learn that he continues in perfect health and has had no return of his former symptoms.

A clinical study of cases involving loss of memory indicates that the various parts of speech are lost in the following order:—(1) Proper names; (2) concrete nouns; (3) abstract nouns; (4) much more rarely verbs, pronouns, adjectives, and prepositions.

Broadbent[3] many years ago published a peculiar case of loss of memory, in which almost all the nouns in a lady's speech disappeared. Her sentences were a mass of verbs and other parts of speech conveying little meaning. This case is interesting, since Broadbent deduced from it the theory that there exist in the brain special naming and propositioning centres; this view, however, has not been generally endorsed by subsequent writers on the subject.

In connection with the disappearance from memory of the latest evolved parts of speech, we may note the similar fact that when a man is the possessor of several languages, *e.g.*, French, German, and English, the mother tongue is the last to disappear. Professor Gairdner[4] records the case of a Welshman suffering from cerebral injury. Previous to the injury he could speak two languages with equal facility, but during the course of his illness completely forgot his English, although he retained his mother tongue. Only in the case of oaths and imprecations did he revert to the use of unmistakable Anglo-Saxon. At a later period he completely recovered the use of his English, and in ordinary intercourse continued to make use of it for purposes of conversation. This case illustrates how the language most deeply imprinted on the mind is the last to disappear from memory, and also that similarly the words most easily revived to consciousness (oaths and imprecations in this case) are those whose images by "frequency of repetition and emphasis of expression" have been most strongly engraven on the cerebral cortical cells.

Having given a few cursory illustrations of defective memory, it may now be advisable to enquire what part of the brain is associated with these mental defects. In other words, in what part of the brain does the seat of memory reside? This is a question perhaps more easily put than answered, but it is certain that recent medical researches have considerably advanced us towards the solution of the problem.

We may take it as an axiom to begin with that the brain is the organ of mind, and that memory, like other attributes of mind, resides somewhere in the mantle of grey cortical cells covering the cerebrum. Certainly apart from these substrata, memory, so far as we know, does not have a separate existence. Further, we now recognise that special kinds of memory are stored up in particular regions of the cerebral cortex. Visual impressions, for instance, reside in what Ferrier calls the occipito-angular convolutions. We know that a man may have both eyes destroyed and yet retain in consciousness memories of the green fields, of flowers, of the appearance of his friends and relations. These memories, however, will likewise be obliterated if the occipito-angular regions of the brain be removed or destroyed by disease. In that case the man's memory for previously-seen objects becomes a complete blank.

The subject of visual memory has been more particularly studied in connection with what Kussmaul[5] has termed the "Aphasia of Recollection." In one form of this disease the visual memories for words are completely destroyed. A sentence in print or in writing may be placed in front of the patient, but, although he sees it with perfect optical vision, even to the individual letters and the finest points of punctuation, yet the words themselves convey absolutely no meaning to his mind. His visual memory for words has disappeared, and he suffers from the affection known as "word blindness." Such an affection can be produced by destruction of the supramarginal and angular gyri on the left side of the brain, for it is in these particular regions that the visual word memories are stored up. Curiously enough, this area seems to have its subdivisions, and, at any rate, cases have been recorded where a man' has been word blind but not letter blind; or he may forget words and remember figures; or, again, his memory for ordinary numerals may be perfect, while Roman figures convey no impression to his mind. This subject could be pursued indefinitely, but I have said enough to illustrate my point.

Again, in regard to memories of sound, we know that these are stored up in the superior temporo-sphenoidal regions of the brain. Destruction of this area in the left hemisphere (Wernicke's convolution) will destroy all auditory word memories. In such an instance the patient may still retain the most delicate perception of sound, even to the falling of a pin or the ticking of a watch, but spoken words convey no meaning to his mind. His auditory word memories have been absolutely destroyed, and spoken speech is to him nothing more than a mixture of unintelligible sounds ("word deafness").

I have thus, I hope, made it clear that in regard to memories of sound and vision we know the actual regions of the brain where these are stored up. Impressions of touch, taste, smell, as well as what is termed the muscular sense, are stored up in other more or less defined areas. Some people have individual memories more strongly developed than others, and we may thus have persons who are strongly visual, or auditive, or motive. But in the recollection of any object or idea the associated centres are called into play and blend together to form a complete mental percept or image which recurs to our consciousness. This, at any rate, is a view of memory supported by a good deal of evidence, and is the one which personally I am inclined to follow.

In this article it will be noted that I have used the term memory in its usually accepted popular sense, and indeed the term amnesia has been found convenient in medical language to describe various classes of loss of memory. It is right, however, to point out that, strictly speaking, two things are often confounded. Memory is one thing and recollection is quite another. Memory is defined by Sir William Hamilton[6] as "the power of retaining knowledge in the mind, but out of consciousness." And he proceeds: "I say retaining knowledge in the mind but out of consciousness, for to bring the *retentum* out of memory into consciousness is the function of a totally different faculty (recollection)." Recollection, in short, is referred to as a reproductive power, and "this reproductive power is governed by the laws which govern the succession of our thoughts—the laws, as they are called, of mental association." I think this quotation makes pre-eminently clear the distinction between memory and recollection as two distinct entities. A person may suffer from loss of recollection, but this does not necessarily imply loss of memory. Certain facts may be safely registered in the cerebral "end stations," but no volitional power may for the moment be able to recall them to consciousness. Such occurrences are common in everyday life. On the other hand, if the memory is destroyed through disease of the cerebral cortex, no power can ever re-awaken that which is no longer existent. Loss of recollection may be caused by diminished functional activity of the cerebral nerve units or by some defect in their commissural fibres; loss of memory implies actual damage or destruction of the nerve units themselves.

To return to the practical aspect of the question, we are reminded by the case quoted at the outset of my paper that loss of memory, actual or feigned, may be of immense importance from the medico-legal point of view. We know how clever some men are at simulating disease, and if a man swears in the witness-box that he suffers from pain in the spine, one is not always in a position to contradict him, even if what he swears is false. In the same way a man can say "I do not remember," and it may be difficult to determine the truth. One is reminded of the scandal in a famous regiment many years ago. The officers of the regiment, one after the other, gave their evidence before the court, and in regard to the point at issue there came the invariable answer, "I do not remember." "*Non mi recordo*" became a byeword of the regiment, which has lost much of its lustre by the occurrence. In evidence of that kind one can, of course, easily draw his own conclusions. In the Auburn trial, on the other hand, the Government medical examiner believed the loss of memory to be genuine, and occasioned by severe mental shock; he further expressed the opinion that at a later stage the witness would yet be able to give his evidence. Such a view has undoubtedly much to recommend it, and, in the interests of justice, it is to be hoped that the anticipation will turn out to be correct.

References.—(1) Crosskey on Professor Gairdner's Paper, Trans. Philosoph. Soc., Glasgow, 1867. (2) Wylie, "The Disorders of Speech," p. 4 8. (3) Broadbent "On a Peculiar Form of Amnesia—Loss of Nouns," Med. Chir. Transactions, 1884. (4) Wylie, Ibid., p. 398. (5) Kussmaul, "Disturbances of Speech," in Ziemssen's Cyclop. of Practical Medicine. (6) Sir Wm. Hamilton, "Lectures," quoted Bastian "On Aphasia," p. 10.

VENTRO-FIXATION OF UTERUS.

By H. W. Bryant, L. et L. Mid. R.C.P. and S. (Edin.), Williamstown, Victoria.

Whilst in Sydney lately I attended a meeting of the B.M.A., and listened to a paper by Dr. Thring, and amongst many other gynæcological subjects that were touched upon he drew attention to the operations for suspending the uterus, such as shortening the broad ligaments by Alexander Adams' method, and suspension of the uterus by fixing it to the anterior abdominal wall.

Several of the speakers who followed Dr. Thring's address gave their views pro and con, but I do not think that a proper distinction was made as to the value of each operation under certain conditions. For instance, what would be the use of doing an Alexander Adams' in the diseased conditions of certain of the pelvic organs, complicated by adhesions and uterine flexions? In such cases as this it is absolutely necessary to open the abdomen and examine the exact conditions of the organs, separate all adhesions, and remove only those parts that are beyond all hope of recovery, and then regulate the position of the uterus according to circumstances.

Howard Kelly's method of ventro-fixation has been much questioned by many operators, but as far as my experience goes, my results have been all that he states. To-night I intend to bring before you some cases that I have operated on by Howard Kelly's method, slightly differing in their histories, but so far resulting in undoubted successes.

First Case.—Mrs. H., *æt.* 33, had one child by her first husband, 14 years ago, which had been delivered dead by forceps, after a very hard confinement, during which she was badly torn. In 1899 she was curetted and had a Schroeder's operation performed, but did not feel much benefited by it. In 1900 she was married again, and went to live up country, where she miscarried three times within the first year.

She consulted me on June 1st, 1901, and her condition was as follows:—The uterus was badly prolapsed and enlarged. The right ovary was in Douglas' pouch, and also enlarged and tender. The os uteri was congested and enlarged, and a thick, yellow discharge exuded from its orifice.

On June 4th the patient was well curetted. On June 10th the abdomen was opened and the right ovary found to be about twice as big as usual, and the tube and ovary were bound down by adhesions, which were gently separated. The left ovary and tube were healthy.

The uterus was lifted well up, and two strong silk ligatures passed through the abdominal peritoneum and subperitoneal tissues, then through the posterior and upper portion of the fundus uteri, and brought out again through the abdominal peritoneum, etc., on the opposite side and tied firmly. The operation was concluded in the usual way by stitching up the layers from the peritoneum upwards. The patient made a good recovery, and went back to her home in the country in August, 1901. She had excellent health after this, and the following year, on December 24th, I confined her of a male child.

During the period of carrying she did not complain of pain from stretching of the adhesions about the ligatures, but said that she was in better health than she had been for years. About a month after the confinement I examined the patient and found the uterus completely subinvoluted, and in the same position as it was after the operation, and the ovary itself had decreased in size to normal.

Second Case.—Mrs. C., *æt.* 33, had been married seven years without having any children.

She suffered from intense dysmenorrhœa before she was married, and this became even worse after marriage. She was once curetted at the Women's Hospital with temporary benefit, and I curetted her some time after, and tried the effect of a stem pessary, also with temporary benefit. Her internal pelvic condition was as follows:—The body of the uterus was badly anteverted, and lying on the bladder, causing a lot of bladder irritation, and the neck of the cervix was kinked, the os itself being turned forwards towards the bladder. The ovaries and tubes appeared to be healthy, and the patient was a particularly strong made woman and very anxious to have a baby.

On April 22nd, 1902, the operation of ventro-fixation was performed, exactly the same as in the previous case, and the wound healed by first intention. On the 12th January, 1903, she was confined of a male child.

Following upon the result of these cases, it seemed to me that the operation had the effect of straightening the canal of the cervix, and that it would therefore be most useful in these hard to be dealt with conditions of acute anteflexion.

I have since operated upon five other cases, three for anteflexion and dysmenorrhœa, etc., one case of complete procidentia in a young girl of 15 years, and another for retroflexion, complicated by a diseased left ovary and tube and a dermoid tumour. All these cases have done well, but, of course, time is the test of everything of this sort. In these post-operative anteflexions, menstruation has come on without notice, and all pain has disappeared.

These results quite justify Howard Kelly's contention that the after results in cases such as}I have brought before you are highly satisfactory both to the patient and to the operator. Of course, before this operation is undertaken, the ordinary methods of treating such cases shall be tried. Again, the abdominal incision should be as small as possible in order to avoid any weakening of the abdominal wall.

Finally, I would commend to you this method of straightening the cervical canal in any form of flexion which will not yield to ordinary treatment, and that this operation be not confined to the cure of retroflexions and prolapses alone, but also that acute anteflexions should be treated in the same manner.

(Read before the Victorian Branch of the British Medical Association.)

NOTES ON THREE CASES OF ACUTE SUPPURATIVE PERITONITIS WITH SUCCESSFUL OPERATIVE INTERFERENCE.

By H. Roger Cope, M.B. (Syd.), Glen Innes, N.S.W.

THE following three cases are instructive and, I think, interesting too, as they were treated at three different stages of the disease, each requiring more exacting treatment. Two of the cases were due to perforative appendicitis and one to an intra-peritoneal rupture of a pyosalpinx in a young girl.

The first case was a young girl, C.B., *æt.* 20, who sent for me on the 28th February. When I saw her at about 12.45 p.m. she was in bed and gave the following history: She got up as usual that morning feeling quite well. Suddenly when dressing she had severe pain in the abdomen. No vomiting. She had had similar attacks before. When I saw her about five hours after the attack she seemed quite jolly and looked the picture of health, save when she got twinges of pain every three or four minutes. Her pulse was 88, steady and regular. Temperature, 100°. The abdomen was not distended, but there was marked tenderness in the region of the appendix. I explained to the mother of the girl the dangers of the disease, and advised her removal to hospital at once. She was admitted at five o'clock, when I saw her again. Her pulse and general condition were the same as when I saw her at 12.45 p.m. She was still having smart twinges of pain, but as the pulse was still 88 there seemed no need of interference. I examined P.R., but gained little information from this source. I left instructions with the matron to ring up at once if the pulse rate increased. Temperature at this time was 100·2°. At seven o'clock that evening the matron rang up to say that temperature was 101·8° and pulse 100. I then determined to operate at once. The usual incision was made, and by inserting the index finger I could feel the appendix loosely adherent to the posterior parietal peritoneum. The intestines were soiled with purulent material and had lost their polish. They were quite slippery to touch. I exposed the appendix and found a gangrenous patch at the base which had perforated. I removed the appendix and made out how far the ininfection had spread. I first left things as they were, save for packing off the infected area as far as one could be certain of. I washed this area thoroughly with saline, and then when that was clean washed out, the rest of the abdomen, concerning the infectivity of which *one could not be certain*. A tube was inserted and gauze packed round the tube, and the abdomen sewn up in layers. The temperature next morning was normal. Pulse, 104. The same evening pulse fell to 88, and after four weeks in bed, rendered inevitable by the necessary suppuration of the wound, she made a good recovery.

CASE 2.—This was a young man, *æt.* 24, who consulted me April 4th. He walked into the room, saying he had had severe cramps in the stomach the night before. He had never had any pain before. He had been vomiting all night. The pulse was rapid, though I have lost record of the rate at this time. There was a little tenderness over the appendix; no distension. I told him to go home and I would see him again. I prescribed a little bismuth and nepenthe, and ordered him to bed. I was sent for at five o'clock next morning, as he was suffering severe pain in the abdomen. Pulse, 95. Temperature normal. P.R.: Some resistance felt, but nothing very evident. I injected morphia, gr. ¼, saying I would be back again at ten o'clock, and if the pulse rate was increasing I advised immediate operation. His friends did not seem to think much of the seizure at all. I saw him again at 10.30. Pulse, 112. Temperature normal. I now advised immediate operation. Seeing that the friends still placed faith in linseed and mustard, I stayed and carried the patient into a springcart myself to make sure that he should start at once for the hospital. I operated at two o'clock the same day, that was nearly 40 hours after the attack. Pulse was now 130 per minute. No rise in temperature. On opening the abdomen quantities of pus rushed out. I felt for the appendix, and felt it enlarged and thickened, but very little adherent. I packed off an area round the wound and washed out all the visible pus; then removed the appendix, which had become gangrenous, and perforated at the base very close to the cæcum. After getting everything clean I was warned by previous experience to look for more pus, and searching in the pelvis with the finger there was a sudden gush of about half a pint of pus. There were no pockets in the lumbar region. I then examined the coils of intestines and the renal regions. Nearly all the coils of small intestine stretching over to the left iliac region were covered with purulent lymph. Seeing the danger of leaving them in this state, I took out all the coils and washed them in a basin of saline solution. I then placed them on a sterilised hot towel and picked off all the lymph with a pair of dissecting forceps. I then filled a basin with biniodide solution, about 1-2000, and dropped the intestines in the lotion and thoroughly washed them. They were replaced and a gauze and tube drain inserted, and the wound above layered up. Pulse was 130 when the operation (which lasted an hour and a half) was concluded. It fell in a few hours to 106. Strychnine, m. 5, was given hypodermically every hour until violent twitching set in. It was then discontinued. About two pints of saline solution were given under the breast. The patient made a good recovery. There was no suppuration, although I quite expected it, and at the end of three weeks he was up, and left the hospital a week later. He is now back at work.

Case 3.—J.C., a young girl, *æt.* 20. I had seen her several times for severe menstrual pain occurring every fortnight. She was well in between times. I gave a little ergot and opium to be taken when the pain was severe, but did not make a P.V. examination, as she was a single girl. I must say that the excuse is a wrong one, and if a girl suffers very much it is a mistake to refrain from making a P.V. examination. A few weeks later I saw her again, and now advised the patient to go to hospital and let me make an examination under chloroform. This was done. The uterus was in good position. There was a great deal of matting round the appendages, but no definite tumour or soft spot could be detected. The uterus itself was mobile.

I kept the patient in bed for about 10 days and had hot douches given twice daily, as there was some vaginal discharge. She went home at the end of a fortnight feeling quite well. I neglected to examine her per vaginam before she left. Two days later I was sent for, as the patient had suddenly taken ill. On questioning her she said she had sudden pain in the lower part of the abdomen, and felt something give way, and at the same time passed matter by the bowel. I did not see what was passed, but both mother and the patient herself were certain that it was passed with a motion. Temperature was 102°, pulse 130. I did not place much reliance on the pulse, as I knew it to often reach the present rate with the least excitement. It had varied at different times between 130 and 88. On examining the abdomen there was no distension, but a good deal of tenderness over the lower half of the abdomen, especially in the right iliac region. P.V.: There was a distinct lump close to the side of and behind the uterus, and gave the sense of fluctuation. I knew by this that even if the sac had burst into the bowel it had very little room to get out. Another thing, the patient looked very ill; and thirdly, on palpating the abdomen a distinct sense of succussion could be made out over the pelvis. I was undecided as to whether the condition was one of appendical abscess or a pyosalpinx. For reasons stated above, I determined to operate at once. I made an incision in the middle line about four hours after seeing the patient. That would be about five hours after she felt something give way.

In this case, as in the last, pus was the first thing met with. All the coils of intestine round and in the pelvis were bathed in it. I packed round with gauze pads, and washed out the infected area, and then searched for the cause. I saw the right tube and ovary enlarged, and pus issuing from a rent near the fimbriated end of the tube. I removed both tube and ovary, which were adherent, and then examined the rectum, but could find no perforation. The appendages on the left side were hopelessly matted and enlarged with the bowel, and as the patient was very weak and there was no evidence of a swelling on that side, I let well alone and washed out with saline solution. I then packed gauze round a Keith's glass tube down into Douglas' pouch and layered up. The gauze was removed in 24 hours and the patient made a good recovery.

The matter which the patient imagined came from the bowel came, I think, through the uterus, into which the tube leaked. The reason this did not relieve tension was that the sac contained several pockets, and that which burst within the peritoneum was quite distinct from that which leaked through the uterus, and so out through the vagina.

Remarks.—I have not gone into the after treatment or symptoms of the patients after the operation in detail, as nothing unusual occurred except in the case of T. S., who had violent abdominal pain, which was due to the strychnine injections. This is the second case I have had in which this occurred. It might often be put down to after pain from the wound. But the pain in this case was regulated easily and certainly by withholding the injections. This case, too, is interesting, as it was far advanced and a large area of intestinal coils was infected, forty hours elapsing since the beginning of the attack before the operation was performed. I had always looked on a case with such quantities of pus and the peritonitis so general as hopeless before; but I will certainly in the future adopt the same plan, viz., evacuate the intestines, strip off all the purulent lymph with forceps, put the whole in a basin, and wash thoroughly in biniodide or any suitable antiseptic. I would like to mention here the indications which lead me to interfere in a case of appendicitis. I do not offer them as anything original, but I have proved them useful, and they may be useful to others. The temperature by itself, whether high or low, is no guide. The pulse, when rapid, with a normal temperature, or at all events out of all proportion to the temperature, is enough to make one think of operating. But the sure guide, though it is not infallible, is not a rapid pulse *per se,* but a pulse that is gradually and steadily increasing. For this reason I always, when possible, see the case every hour, and if the pulse is gradually increasing each hour, I don't wait for it to be 100 or 110, as the fact that it is climbing up each hour is quite sufficient evidence that it will probably reach 100 to 110, which is by some surgeons considered the point of danger. To sum up, a rapid pulse should make one seriously think of operating, but a gradually increasing pulse should make no doubt about it.

CLINICAL AND PATHOLOGICAL NOTES.

CONGENITAL ABSENCE OF THE COMMON BILE-DUCT.

The following notes of a somewhat rare condition may be worthy of record:—M.H., female, born healthy; family history, parents healthy; four older children all healthy. The urine was bile-stained from birth; about the third day the skin and conjunctivæ became yellow. The umbilical cord separated on the third day, and there was a good deal of bleeding from the umbilicus that lasted for about an hour, but was easily controlled by pressure. The motions were chalky white from birth, and maintained this character throughout. The bowels were never constipated, and at one time were very loose. The child seemed to thrive in spite of the jaundice for about five weeks; after that she gradually fell away, becoming thin and asthenic. She died at the age of five months without developing any special symptoms. Post-mortem 28 hours after death. Rigor mortis not present; subcutaneous fat poorly developed; the internal organs were bile-stained. There were several ounces of bile-stained fluid in peritoneal cavity; none in the pleura. Heart, spleen, and kidneys were apparently healthy. The liver: no communication could be found between the bile-ducts and the duodenum; the gall-bladder was small, empty, and unstained; the cystic duct ended in a cul-de-sac; there was no common bile-duct; the hepatic duct was dilated and full of bile; the liver was small, hard, dark green in colour, showing white bands of fibrous tissue on its surface; on section, the organ was found to be markedly cirrhotic and dilated bile-ducts of various sizes could be seen running through the organ; microscopically, there was a mass of fibrous tissue accompanying the blood vessels within the liver, in which could be seen dilated bile-ducts plugged with bile; the liver cells seemed healthy, but there was a moderate inter-lobular fibrosis.

G. D. Menzies, M.B., Ch.M. (Syd.)
Sydney.

Typhoid Fever in Melbourne.—Alarm has been created by the large number of cases of typhoid in Melbourne and suburbs, and in some of the country districts. Although the outbreak is considerable, it is not above the average for Melbourne in the middle of summer. There are 29 typhoid fever patients in the Melbourne Hospital. Dr. Amess, Medical Superintendent, states that so far as the Melbourne Hospital is concerned there has been no marked increase in the number of typhoid fever patients.

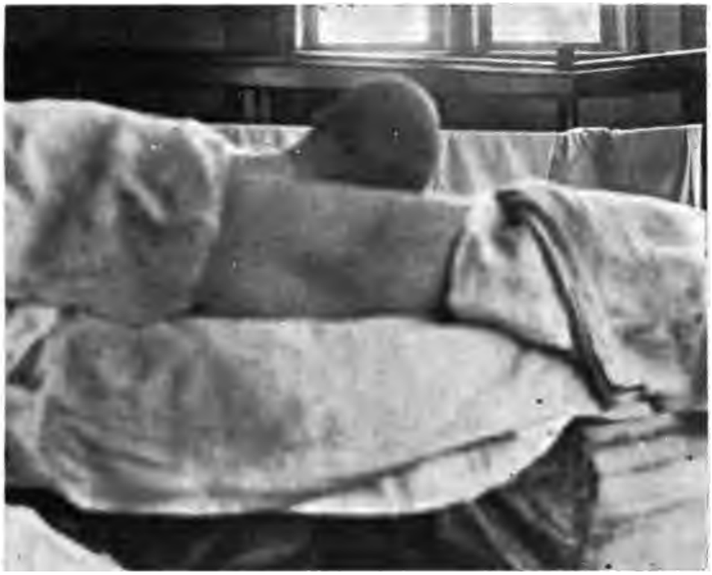
MIRROR OF HOSPITAL PRACTICE IN AUSTRALASIA.

ADELAIDE HOSPITAL, S.A.

Gangrene of Strangulated Hernia on the Right Side—Rupture of Bowel into Scrotum—Strangulation of Hernia of Left Side whilst in Bed, before the Artificial Anus on Right Side was Cured.

(Under care of Leonard W. Bickle, F.R.C.S. (Edin.), Hon. Surgeon, Adelaide Hospital, Adelaide.)

John C., *æt.* 49, single, labourer, born in London, 33 years in the State, admitted into Victoria Ward, Adelaide Hospital, 24/11/02, complaining of swelling in the purse, with dragging abdominal pains. He had continuous vomiting for six days; this ceased two days prior to admission. Vomit consisted of fluids taken and of green bile, never fæcal in odour or appearance; bowels confined during this time. Did not consult a doctor till two days before admission, when the bowels *were opened* by aperient. Has been ruptured on both sides for over 30 years. Has not been able to return the right rupture for many years, but can easily return the left.



On Admission.—Patient is a strong, healthy looking man, with no history of any serious illness at any time. The temperature is 98°; pulse 88, regular, full and compressible; respirations easy; tongue moist and coated.

On Examination.—The scrotum on the right side is greatly swollen, being as large as an ordinary child's head of six months old. The swelling is very tense, and extends up to the external ring, definitely fluctuant, but not translucent. It is red, and hot to the touch, especially over the lower part, where the testis can be distinguished. There is no impulse on coughing, and no tenderness to touch. The abdominal pains are very slight to what they have been. On the left side is a large hernia readily reducible.

The swelling on the right side is said to have increased considerably since the pain began a week ago.

Urine 1031, acid, no sugar, no albumen.

At the request of my house surgeon, I saw the case soon after admission, and, as the man was quite comfortable, postponed operation till my next regular day, which was on the following morning.

When on the table next day I took a snapshot with a kodak just before operating. The photo. gives a good idea of the size of the scrotum.

25/11/02.—Under ether an incision was made over the tumour in its long axis. To the surprise of all present it was full of fæcal matter. The upper part of the tumour contained a goodly part of the cæcum, and there was a rupture of the bowel about the size of a florin just beyond the ileo-cæcal valve, which latter could be felt with the finger when passed in through the rent in the bowel. The general peritoneal cavity was shut off. The artificial anus thus formed was left *in situ*, and making a counter opening through the lower part of the scrotum, the patient was put back to bed. The hernia was of the congenital variety.

The temperature was just over 100° F. in the evening (temperature of reaction), after that it remained normal. Fæces came freely through the opening in the bowel.

4/12/02.—Progress satisfactory. Eats well and sleeps well. Some eczema from irritation of fæces. Wound not clean enough yet to close bowel.

5/12/02.—Sent out into sun on a wheeled chair.

11/12/02.—Patient had some retching and abdominal pain during the night. This morning the house surgeon found the left hernia down and irreducible. Taxis was tried and failed, and I was sent for. A further brief trial of taxis showed the hernia to be strangulated. Considering the short time the hernia had been down, I ordered a hypodermic of morphia *over the neck* of the sac. An hour later the hernia was readily reduced, with cessation of pain and vomiting.

18/12/02.—Under chloroform the wound was thoroughly cleansed with normal saline douche, and all adhesions (and they were many) were broken through or divided between catgut ligatures. The whole of the cæcum and the appendix, as well as some of the ileum, were included in the hernia. The appendix was removed. The opening in the bowel was sutured—the mucosa first by continuous, and the peritoneal coat after by Lembert sutures. It was necessary to place the patient in the Trendelenberg position to retain the bowel, and also to nick the neck of the sac as well. The skin wound was closed by silkworm gut sutures, a small drain being provided for. The convalescence was satisfactory; except for first day or two little discomfort was experienced, and by the 30th he was practically well. A radical cure was not achieved; the length of time in suturing bowel, separating adhesions, etc., rendered longer efforts undesirable.

9/1/03.—Discharged. Sent to Convalescent Hospital to recoup prior to operating for radical cure on left side.

27/1/03.—Re-admitted. Scrotum large and baggy. On left side is a large mass in connection with the cord (hydrocele of cord) and also a large reducible hernia.

29/1/03.—Under A.C.E. Through an inguinal incision two small lipomata were enucleated; then a hydrocele of cord was opened; within this was a smaller sac containing a hæmatoma. Both sacs were excised. The hernial sac was then separated and tied off. Deeper parts of wounds brought together by catgut sutures, and the skin with silkworm gut and horsehair. In addition to above there were also many small cysts (the cysts of Pawlick).

8/2/03.—Wound healed by first intention.

14/2/03.—Evidences of deep suppuration. Wound opened by probe and pus evacuated. On March 2nd he was sent to the Convalescent Hospital.

9/3/03.—Re-admitted for operation for radical cure of right side.

12/3/03.—Under A.C.E. an incision was made over evident slit in abdominal wall; this was deepened and sac exposed. The sac was opened, showing many adhesions between bowel and sac wall. These were separated, bowel reduced, sac separated and closed by purse-string suture, tissues approximated by catgut sutures, and skin with horsehair and silkworm gut. The lower parts of the old sac were not dissected out.

20/3/03.—Healed by first intention.

26/3/03.—Allowed up.

30/3/03. Sent to Convalescent Home.

Remarks.—There are several points of interest in this case: (1) The remarkable fact that a man should go through six days of intense pain, complete constipation and vomiting, when within reach of medical assistance. (2) That the gangrene, when it it did occur, should have caused so little constitutional disturbance. (3) That according to his statement the bowels must have acted by the natural channel after the bowel had ruptured into the scrotum. (4) The happy circumstance that the neck of the sac was closed by adhesions before rupture took place; to this, undoubtedly, he owed his life. (5) The occurrence of strangulation in the hernia on the other side whilst lying quietly in bed. A practical point of importance is shown here. I refer to the injection of morphia over the neck of the sac and the release of the strangulated gut as it acted. I have used this method now successfully in several instances, and I am convinced that morphia hypodermically injected has a local as well as a general effect. The value of this applies only to recent strangulations; if down many hours I should not rely on it, but cut down, as far the safer procedure. (6) An interesting feature in the artificial anus was that the mucosa was constantly and rhythmically contracting and dilating. (7) In closing the opening in the bowel the edges of the mucosa were not freshened, merely approximated by suture. I adopted this plan on the suggestion of Prof. Watson, who was present at this operation. The result was quite satisfactory, and much time was saved. In the later operation for radical cure an opportunity was given of seeing the soft, pliant scar of the rupture; despite the loss of substance there was no puckering. (8) The pathological curiosities of the hernia, viz., the hæmatoma and hydrocele of the cord, two lipomata, many small cysts, and a large portion of bowel.

Chloretone was given prior to each operation, and there was no after-sickness.

30/3/03.—Seen to-day; quite well, and herniæ well cured.

At the operation on the 12/3/03, the old sac was not excised, and there was a recurrence of the hernia on the right side. In June a further operation was done. The new sac was very fine and translucent; many new adhesions had formed. The operation was long and tedious; the whole of the old sac was carefully excised. When seen in December the man was in excellent health. The left side is perfectly sound; on the right there is just a slight bulging, but no hernial protrusion.

REVIEWS AND NOTICES OF BOOKS.

The After Treatment of Operations: A Manual for Practitioners and House Surgeons. By F. Lockhart Mummery, F.R.C.S. (Eng). London: Ballière, Tindall & Cox. Sydney: L. Bruck. Price, 5s net.

This book, taken on the whole, is an extremely sound book, and provides a goodly supply of sound sensible advice to those who are concerned about after treatment of operation cases.

In cases of intestinal obstruction it is of little use to say that the patient's abdomen should be opened and the adherent gut freed. Unfortunately patients under such circumstances have too often other adhesions, so that the advice is much more easily given than it is the remedy applied. Without doubt, in most instances it will be found to be much safer to establish an intestinal fistula low down in the distended gut and to operate for the relief of the obstruction if necessary later on.

In dealing with so-called catheter fever, the ordinary sweating treatment is spoken of, but no mention is made of the preventive treatment: the injection of a solution of silver nitrate, two grains to the ounce, into the urethra in order to antisepticise any abrasion of epithelium. It is of little use in many cases of surgical uræmia, or any other uræmia for that matter, to purge and sweat the patient, and as for pilocarpine, its action is often positively harmful. More recent surgical work goes to show that an incision into the other kidney is both rational and safe, and usually productive of the most beneficial results. The persistent vomiting after renal operations is said to settle down after a few days, but it may even kill the patient; an eighth grain of morphia, repeated after an interval, I have found to be singularly efficacious and devoid of danger. The palliative treatment of internal hæmorrhage is spoken of, but the crying need for prompt active surgical interference is hardly strongly enough insisted upon. When such hæmorrhage is recognised, the abdomen must be opened by the practitioner himself or by some one who may be able to do so with some hope of success, and this, too, never mind how near death the patient may appear to be. In speaking of shock, mention is made of the marked influence prolonged manipulation as well as severe handling and also great blood loss has upon the future of the case. I am thankful to say that no mention is made of that absurd cloak for sepsis termed postponed shock. Altogether the book is one well worth buying, particularly by those who are interested in the after treatment of surgical cases of any sort, not necessarily operation cases. H.C.H.

Handbook of the Diseases of the Eye and their Treatment. By Henry M. Swanzy, A.M., M.B., F.R.C.S.I. Eighth edition. 1903. London: H. K. Lewis, Gower-street. Price, 12s 6d.

The eighth edition of this admirable text-book will be welcomed alike by practitioners and students. The book is so well known and appreciated in its former editions that it is not necessary to say much in praise of it. The present edition has been brought thoroughly up to date. Amongst the new matter are descriptions of several varieties of inflammation and injuries of the cornea; a more detailed account of sympathetic ophthalmitis; of the use of the magnet for foreign bodies in the eye; of tumours of the optic nerve, a description of Maxwell's latest operation for shrunken socket; and of Krönlein's operation for removal of orbital tumours, etc.

We agree with the author in his preference for the plane mirror in retinoscopy, and in the recommendation of fully correcting glasses for myopia. For expression of trachoma granulations, Knapp's roller forceps are not mentioned, though here they are preferred to Grady's forceps, which are recommended by the author. Perusal of the book confirms our opinion that it is one of the best text-books extant on ophthalmology, if not the best. F.A.P.

Modern Methods in the Surgery of Paralysis. With Special Reference to Muscle-Grafting, Tendon Transplantation, and Arthrodesis. By A. H. Tubby, M.S. (Lond.), F.R.C.S. (Eng.); and Robert Jones, F.R.C.S.E. London: Macmillan and Co., Ltd. Price, 10s net.

In this book the newer methods of treating paralytic deformities by means of muscle grafting, tendon transplantation, and arthrodesis are mainly dealt with.

In the first chapter the authors, in discussing the etiology of anterior poliomyelitis, favour the infective theory, and they incline to the opinion that the rapid recovery of the majority of muscular groups indicates pressure upon nerve elements rather than a destructive inflammation. If what they state is true, no case, however neglected, and however apparently hopeless, need be considered beyond surgical aid, if the slightest quiver can be obtained as the result of an effort of voluntary movement in the wasted, overstretched muscles.

Great stress is laid on the fact that "contractures must be overcome before opposing muscles can properly act, and that elongated muscles are earliest restored to power by maintaining them in a slackened position."

The authors evidently have had considerable experience in tendon transplantation, for, after informing us that Mr. F. S. Eve has recorded four cases on which he had operated, they tell us that they have performed 274 of these operations. In a manner that becomes almost wearisome, case after case is reported to show the efficacy of this method of treatment. It would have added considerably to the usefulness of the book had fewer cases been quoted, and more details given of the technique of the various operations—such details, as are given for instance, in describing the method of implanting the Peroneus Longus into the Tendo Achillis.

The operation of converting the Pronator Radii Teres into a supinator, is quite an original one. It is well and fully described.

That the book will serve a useful purpose there can be little doubt, seeing that it makes clear the great advances that have been made in this branch of surgery; there also can be very little doubt that its publication will soon enable Messrs. Tubby and Jones to record a still larger number of cases of tendon transplantation and muscle-grafting, but we fear disappointment will be the lot of the man who buys the book thinking that with its aid alone he will be able to perform these operations. C.P.B.C.

THE AUSTRALASIAN
MEDICAL GAZETTE.

SYDNEY, 20TH JANUARY, 1904.

INFANTILE MORTALITY.

THE high rate of infantile mortality in the Commonwealth is a matter of equal importance with the decline in the birth rate, since both tend to the reduction in the rate of increase of the population. We understand this subject will receive consideration at the hands of the Birth-Rate Commission at present sitting in Sydney.

A large number of infants dying in the year are illegitimate, and from various well-known causes. The death rate among these will continue to be high. These children are born under unfavourable circumstances, and thus are frequently early deprived of the mother's milk, and are dependent upon bottle-feeding at the hands of a foster parent or nurse, who can never supply the care and attention which a mother can give. But, apart from illegitimacy, we know that in many cases the mothers refuse to suckle their offspring, and the children are thus placed under unfavourable conditions for the maintenance of their health and strength in the early months of life, and frequently succumb to digestive and lung troubles.

What can be done to prevent this serious waste of human life, and the economic loss to the community? Various suggestions have been made, but one of the most practical and valuable appears to be, that the principles of personal hygiene and infant-feeding should be taught to all girls in the higher classes at the high schools. Many young women become mothers entirely ignorant of the wants and treatment of young infants, the result being that many, specially first-born, children die, not so much from unpardonable neglect as from sheer ignorance on the part of the mother. Another suggestion is that some provision should be made for the proper supply of pure milk (not concentrated milk, with half per cent. boric acid in it!) for the children of poor persons who are unable from financial or other reasons to provide the necessary nourishment for their children. This has been done in America, and there seems no insuperable difficulty in the way of its adoption in this Commonwealth. Another valuable suggestion has been made by Dr. W. G. ARMSTRONG, the Sydney City Health Officer, to the Health Committee of the City Council, that a circular should be printed and circulated through the post to all households in the poor and thickly-populated neighbourhoods in which a birth has been registered within the last six months, giving some general directions on the treatment of infantile diarrhœa. This would be the means of directing the attention of parents to this important and often fatal illness of infantile life, and by timely advice may be the means of saving a large number of infants.

Another important factor which should be specially emphasised is that infantile diarrhœa is often due to a specific organism, and that it is a contagious disease. The importance of careful destruction of the excreta, and thorough disinfection of all utensils and napkins, should be impressed upon the parents of infants suffering from gastro-enteritis. Other suggestions may be offered in the report of the Birth-Rate Commission, and we hope that the result will be a considerable diminution in the present high rate of infantile mortality.

MEDICAL INSTITUTES.

WE regret to note that the Council of the New South Wales Branch of the British Medical Association has been compelled to add another institution to its list of societies considered inimical to the interests of the medical profession. The Balmain Dispensary, which for a long time has been considered an institution unsatisfactory in its methods of treatment and remuneration of its medical officers, has now been placed under the ban, and under present conditions no member of the New South Wales Branch of the British Medical Association can hold office as one of its medical officers. This can hardly be considered a hardship. On the contrary, in view of the new conditions imposed by the committee of this institution, a medical man may congratulate himself rather on being free from the degradation and disgrace which must attach to anyone who, except under the most exceptional circumstances, is compelled to take the position of medical officer to such a dispensary. We know that no medical man who respects himself or his profession will willingly sell himself, body and soul, to be the slave of an institution of this kind; and the sooner the committee of the Balmain Dispensary recognise the grave error they have made in their own interest, as well as in that of the sick members of the lodges, the better it will be for all.

The profession in New South Wales has never been more united than it is at present, or more determined to make a stand against the unfair and impolitic encroachments of certain benefit societies, and the success of the medical officers at Inverell in their dispute with the Oddfellows' lodge there emphasises the truth of this statement. If the benefit societies insist on throwing down the gauntlet, then nothing remains but for the profession in New South Wales to take up the cudgels, and fight for the entire abolition of all contract practice on its present lines. We sincerely hope that the object lesson of this State will be quickly learned by the profession in the other States of the Commonwealth, and the existence of medical institutes, such as the one recently established at Brunswick, in Victoria, the dispensary in Brisbane, and other similar institutions, become an impossibility.

As we have stated on former occasions, so we repeat again now, the New South Wales Branch of the British Medical Association has no desire to "smash up the lodges." All we ask for is a fair remuneration for the medical officers of the benefit societies, and the abolition of those harassing and degrading conditions which are intolerable to an honourable professional man, and which render impossible that harmonious relation which should exist between doctor and patient.

THE MONTH.

To our Contributors.

In consequence of the great and increasing pressure upon our space allotted to original articles, we are compelled to hold over from time to time a large number of communications sent to us for publication. In another column we always acknowledge the receipt of these articles, but it is often quite impossible to comply with the requests of the writers that the articles should appear in the next issue. Further, we cannot undertake to publish every article sent, and in case of papers being rejected, we shall return the manuscript only upon receipt of stamped and addressed envelope.

Preservatives in Foods.

In another part of this issue we publish a full account of the discussion which took place at the last meetings of the New South Wales Branch of the British Medical Association on the resolutions moved by Dr. Wilkinson on the question of the use of boric acid as a preservative in milks. The report of the Select Committee of the Legislative Assembly on this matter was, in the opinion of the majority of medical men, so biassed that it was felt to be necessary that some protest should be made by the profession generally against the conclusions in this report. The trend of the discussion and the overwhelming majority in favour of Dr. Wilkinson's resolutions showed that this was not, as the lay press wished to make out, merely a little difference of opinion among a few medical men. It showed that the vast majority of the profession in Sydney is absolutely opposed to the principle of food adulteration in any shape or form, and that it disapproved of the bolstering up of any industry at the risk of the public health.

Plague Precautions in Sydney.

It is satisfactory to know that the possibility of a reintroduction of the bubonic plague into

Sydney has been carefully kept in view by the Health Department. In reply to recent enquiries by the City Council, the Secretary to the Sydney Harbour Trust Commissioners has intimated that the necessary precautionary measures against a recurrence of the bubonic plague in Sydney were being taken by steaming the various wharfs. The Commissioners considered that the methods that were being adopted were more effective in keeping down the number of rats than a rat-catching staff would be. Under these circumstances the Commissioners were not disposed to appoint a staff of rat-catchers.

The Melbourne Hospital Sunday Fund.

The Committee of the Hospital Sunday Fund in Melbourne has only just distributed the money collected on Hospital Saturday and Sunday. The delay is attributed to a careful consideration by the committee of the claims of the Presbyterian churches that they should be given representation on the governing bodies of the hospitals participating in the fund. Some of the money paid into the fund was handed over on the distinct stipulation that any hospital refusing this claim should not receive any of the money collected at these particular churches. All the hospitals but three—namely, the Melbourne, St. Vincent's, and Queen Victoria—agreed to this proposal. But by the steadfast refusal, or the inability under their rules, of the three institutions named to grant the request of the churches, the committee appointed to distribute the fund has been placed in a peculiar position. The committee was strongly averse to recognising this condition, for it had constantly maintained that Hospital Sunday collections did not carry with them the right to governorship privileges that were accorded in respect of individual donations, and when finally it was driven to yield the committee insisted that the managing bodies of the three institutions concerned should be given an opportunity to so change their regulations that the demand of the churches might be granted. At the instance of the Lord Mayor, therefore, who is perpetual chairman, the committee decided at its last meeting to distribute the funds in the ordinary way. The hope was expressed that by the Hospital Amendment Act, which is to come before the State Parliament next session, the necessary changes will be rendered possible.

According to the Melbourne *Age*, there appears, however, very little probability of the Melbourne Hospital in any circumstances acceding to what the committee of that institution regards as a most unjustifiable claim by the Presbyterian Church. The hospital committee has repeatedly discussed the matter in all its bearings, and has so often refused to allow church representation in regard to Hospital Sunday collections, and there does not at present seem to be much likelihood of the committee changing its views. It declines to admit that church officers are in any way entitled to nominate themselves as governors (and as such to exercise the voting privileges) in respect of the Hospital Sunday collections, which in the main are composed of small individual contributions; and further, it maintains that the principle involved in the demand is utterly opposed to the spirit which animates the Hospital Sunday movement. To carry the principle to its legitimate conclusion, the organisers of Hospital Sunday band performances, and of other outdoor collections, would have an equal claim to the same privileges, and the lists of voters might thus be flooded with the names of people who had not subscribed themselves, and had no authority to represent the myriad of subscribers who contribute small sums, varying as a rule between a penny and a shilling, to the funds.

The Open-Air Treatment of Tuberculosis in New Zealand.

The New Zealand Government, acting on the advice of Dr. Mason, the Chief Government Medical Officer, have erected a sanatorium for the open-air treatment of patients suffering from pulmonary tuberculosis at Maungakawa, near Cambridge, N.Z. It has accommodation for 33 patients. The site has an elevation of 900 ft. above the surrounding country, and commands a beautiful and extensive view of the Waikato Plains. The sanatorium is equipped with every modern convenience, and was opened for the reception of patients last month by Sir Joseph Ward. At the recent Science Congress in Dunedin Sir Joseph Ward said he intended to ask the hospital boards in those districts where the climate was known to be beneficial for chest ailments to undertake the building of annexes for the reception of consumptives. With 13 or 14 annexes, capable of holding 30 patients each, the colony would be enabled to house and care for all those affected by this disease. He proposed to have these institutions established in Auckland, Hamilton, New Plymouth, Masterton, Otaki, Nelson, Christchurch, Naseby, Lawrence, Queenstown, and somewhere near Dunedin. Within these institutions every precaution would be taken to destroy infected material. These will be in addition to the large sanatorium at Waikato, which has already given excellent results.

BRITISH MEDICAL ASSOCIATION NEWS.

PROCEEDINGS OF AUSTRALASIAN BRANCHES.

New South Wales.

THE regular monthly meeting of the Branch was held at the Royal Society's room on Friday, December 11th, 1903; Dr. A. J. Brady (president) in the chair. There were 42 members present.

The minutes of the previous meeting were read and confirmed.

The President announced the election of Dr. H. H. Lee, of Wollongong.

Dr. WORRALL exhibited—(*a*) Degeneration of uterine myomata; (*b*) concurrent uterine and tubal gestation; (*c*) the situation of the corpus luteum in four cases of ectopic gestation; and read some notes on the cases.

Drs. MAITLAND and PERKINS discussed the cases, and Dr. WORRALL replied.

Dr. FOURNESS BARRINGTON read a paper on a first series of "One Hundred Cœliotomies for Pelvi-Abdominal Disease."

Dr. WORRALL congratulated Dr. Barrington on his paper, and agreed with most that he said. Professor Watson was the first to point out that in tier suturing it was inadvisable to transfix the dynamic muscle with the suture which brought together the static aponeurosis. He (Dr. Worrall) had called attention to the importance of noting the situation and condition of the appendix in all cases of abdominal section. He thought well of flushing with saline solution in intra-peritoneal hæmorrhage due to ruptured ectopic gestation, and in pus contamination more than pelvic.

Dr. GEORGE ARMSTRONG said that he had listened with pleasure to Dr. Barrington's paper in regard to conservative operations on the Fallopian tubes. He thought great caution was necessary before deciding to leave a tube if its fellow of the opposite side had been found to contain pus, more especially if gonorrhœa had been suspected as the infecting agent. He remembered a case at the Sydney Hospital in which the left appendage had been removed and the right one allowed to remain, as it appeared to be healthy, and the patient was a young woman. Four days after the operation she developed a severe pain in the right side with an acute exacerbation of temperature. A second abdominal section was performed, when the right tube was enlarged to the size of a sausage, and contained pus. Therefore, if gonorrhœal infection is suspected it is wise to remove the tubes and leave as much ovarian tissue as possible. In regard to drainage, he didn't remove the vaginal gauze drain as early as Dr. Barrington, but commenced to remove it at the end of 48 hours, and gradually remove it during the next seven days, unless any untoward symptoms developed indicating that pus was being pent up behind the gauze drain. The gauze was more easily removed and with less pain to the patient the longer it was allowed to remain *in situ*. The layer suturing for closing the abdominal wound was ideal; but in consequence of accidents with the suture materials he favoured through-and-through silkworm gut sutures, with catgut sutures for the anterior aponeurosis. This method of closing the abdominal wound gave a very faint scar, and could be performed more quickly than by closing the wound with layer sutures.

Dr. CRAGO said he did not like to allow Dr. Barrington's remarks on conservative surgery—particularly of the ovaries—to pass without comment. Theoretically, of course, it was the ideal procedure, but in practice it was not always a success. In his own experience of abdominal surgery he had seen two or three cases requiring operation for cystic degeneration of portions of ovaries which had been left at previous operations.

Drs. BOWKER and TAYLOR YOUNG also discussed the paper.

Mr. BARRINGTON, in reply, thought the object of a paper was twofold—either an endeavour to teach others, or for the writer to learn from the discussion which followed—and his aim, admittedly selfish, had been entirely the latter, and was not without result. The suggestion of protecting the vaginal end of a pelvic drain by guttapercha tissue was most valuable in enabling the drain to be more easily started, and he firmly believed in early starting of such a drain—certainly within 48 hours. It was quite possible to overdo conservatism, yet he believed in a judicious conservatism. Much pelvic inflammatory disease, thanks to the natural reparative processes, became quiescent, and the remnant of a dormant process was the disability resulting from adhesions in some cases. This could be undone by their release, provided the organs were healthy, and if suitably replaced they could not become adherent in their previous position. In some of these cases his hands had been tied by the patient's wishes, but pregnancy had followed. In conservatism the patient accepted of her own free will a certain risk. What was particularly wanted was a bacteriological expert opinion of the secretion from a doubtful tube given during the course of an operation. The gonococcus was the least virulent of cocci, and the possibility of a mixed infection in the case to which special reference had been made was suggested. He had not found depressing effects from the pre-operative dose of calomel, but in septic cases it was satisfactory to know that it was in the intestinal tract, and could not be vomited. Its use had saved much anxiety in enabling the bowels to be moved with comparatively little difficulty. It had been stated that through-and-through suturing was quicker than tier suture, but it must be remembered the duration of an operation was to be measured by the duration of administration of the anæsthetic. When peritoneal apposition was affected by layer suture the anæsthetic could be suspended, and the remainder finished without, but in through-and-through suturing the patient had to be kept under until the last suture was tied. He thought it very important that the aponeurotic coapting sutures should be hardened to resist absorption for a month. The tier suture was then proof against all subsequent accidents, as firm fascial union must result.

Dr. WILKINSON moved the following resolutions:—

1. That in the interests of public health neither boracic acid nor borax should be used as a preservative in ordinary or concentrated milk, or even in milk products.
2. That this resolution should be communicated to the State Government and the City Council through the proper channels.
3. That a deputation from the Association should wait upon the Premier to place the views of the medical profession on this question before him.

He said: I desire to appeal to this Association, which represents medical opinion in New South Wales, to offer a serious protest against an attempt that is being made to legalise the adulteration of food. For some time past the Board of Health has put into force certain regulations that aim at checking the adulteration of milk with boracic acid. The City Council, through its Officer of Health (Dr. W. G. Armstrong), has not hesitated to support the Board of Health. Prosecutions were instituted, and then the State Parliament intervened by the appointment of a Select Committee to call witnesses and draw up a report on the matter. The Select Committee was in no way constituted to inspire confidence, and the only medical member of the committee, Dr. Andrew Ross, published a strong protest against the committee's finding. The nature of the evidence, apart from the evidence of the experts, was most unsatisfactory. It would seem that the opinions were sought and selected not because they were valuable, not because they carried any weight, but because they were friendly. Those who conducted the inquiry had it in their power to select and elicit evidence that was friendly, and to exclude evidence that was hostile to the parties financially interested in the inquiry. It has always been the tradition of the medical profession to play the unselfish, unprofitable and unostentatious rôle of acting and advising as a body in the cause of public health. It therefore becomes our duty to give staunch support to the Board of Health and at the same time to protest against the irrelevant evidence and pernicious doctrines of those medical men who allowed themselves to become mere tools in the hands of such accomplished advocates as Mr. R. D. Meagher and Mr. R. H. Levien. Through the public press we have learnt the general nature of the evidence furnished by Drs. Arthur, Jarvie Hood, Murray Oram and Sydney Jamieson. I wish to ask whether the profession endorses or repudiates these opinions. The worst offender is Dr. Jamieson, who sees no harm in recommending that ·5 per cent. of boracic acid should be sanctioned by law as a preservative in concentrated milk. I do not ask you to support my resolutions because the opinions of these medical men are bringing medical science into discredit — medical science will survive such attacks—nor yet because these opinions are in open conflict with scientific opinion. Scientific opinion may entirely change. I ask you to support me, because these medical men have appeared before the public to advocate measures that are a direct menace to public health. It is therefore high time that this plan of food adulteration should be placed before the public in its proper light. The question at issue is a highly technical one, and I decline to recognise any and every general practitioner as a competent authority on such a difficult matter. It is essentially the work of the bacteriologist, the pharmacologist, and the toxicologist to solve these complex problems by careful and various experiments, not only on man, but on animals. Such enquiries need special training, special skill, and special knowledge. Few of us can lay claim to the expert knowledge upon which such problems are decided. We must, therefore, loyally abide by the decisions of these authorities who have made these special investigations. It is difficult enough for the experts in the cool atmosphere of the laboratory to arrive at sound conclusions; it is impossible for those who have no expert knowledge to form any sound opinion of their own; but it is very easy in highly technical questions, upon which we can merely accept or reject authority, to allow our opinions to drift with the current of self-interest. At the present juncture the sound conclusions of science are highly inconvenient to certain vested interests. It is nearly 13 years since the use of salicylic acid and boracic acid as preservatives was prohibited by law in France after an exhaustive inquiry by experts. Still more recently, as the result of an exhaustive enquiry by the Board of Health at Berlin, boracic acid as a preservative was condemned in no measured terms. In Vienna and Hamburg also scientific authorities condemn boracic acid as a preservative. For many years Professor Liebreich has been the prominent advocate of boracic acid. Liebreich writes thus in his "Encyclopædia of Treatment" (vol. i., p. 464, article "Boracic Acid"): "To preserve milk for some days" (in Germany, not New South Wales) "an addition of 1·2 per 1000 is sufficient." He adds: "Yet people should be warned against the use of such articles of diet, since poisonous effects have been observed after the use of excessive quantities of preservatives containing boracic acid." Further, Liebreich has again and again expressed the view that the long-continued daily consumption of 1·2 grms. (18 grains) of boracic acid or borax, if these substances are taken with food, has no injurious effect on health. He even thinks that these substances may be looked upon as useful in the human organism. In any case, even Liebreich's maximum of 1·2 grms. applies to adults. Another very important point in Liebreich's attitude is that he recommends boracic acid as a preservative in various meats and meat products, especially sausages, and also for fish. Although in Germany Liebreich's partiality for boracic acid is described as an "inexplicable and unfortunate passion" (*unbegreifliche und unglückliche Liebe*), I can find nothing in Liebreich's own writings to justify the use of boracic acid as a preservative in milk. I believe that Liebreich himself would stand aghast at the recommendation of ·5 per cent. or 35 grains of boracic acid to the pound of concentrated milk. Dr. Jamieson has no scruples in making Liebreich's advocacy of boracic acid as a preservative for meats apply with equal force to its use as a preservative for milk. I believe that Liebreich himself would repudiate and resent this style of argument as totally misrepresenting his own views. Meat is the food of adults, and preserved meats are never consumed day after day in large amounts. Sausages soon cause satiety. Milk, on the other hand, is the staple food of infants, especially among the poorer classes, and is consumed day after day in very large amounts. However much there may be said of the value and safety of boracic acid as a preservative in meats, it is entirely irrelevant to quote Liebreich's opinions and experiments in favour of boracic acid as a preservative in milk. So far, then, as Liebreich's views are concerned, whatever their value or truth, they are entirely irrelevant to the question at stake. But Dr. Jamieson and the other witnesses tell their manifold experience with boracic acid as a drug. *Is every useful drug a harmless addition to milk?* Again their argument is absolutely irrelevant. These witnesses go still further. They suggest that milk, because it may be used to lessen the effect of an irritant in the stomach, may also lessen the injurious effect of boracic acid upon the stomach. One would think that the milk was added to the boracic acid, and merely in order that this poison might be exhibited in a less dangerous form than usual. Whenever the facts of their witnesses are true, they are irrelevant. On the other hand, if their facts are relevant, they are not true. Their main facts are—(1) that boracic is a good preservative for milk in hot weather, and as an intestinal antiseptic will lessen infant mortality; and (2) that the maximum required to preserve the milk is considerably less than the minimum required to cause poisonous effects. These facts can be more or less accurately tested, and have been tested by numerous authorities, and there is general agreement among scientific authorities that boracic acid is not a good preservative for milk, and if used in amount sufficient to preserve, may cause poisonous symptoms. Let us first review the evidence in favour of boracic acid as a preservative. The decomposition of milk is essentially due to the action of bacteria, varying with the number and nature of the bacteria and surrounding conditions, especially the temperature and the presence or absence of oxygen. Under ordinary conditions, Lazarus found that boracic acid in large doses delayed for some hours the curdling due to the lactic acid bacillus, but had no great effect in postponing putrefaction. Nocard, of Paris, corroborated these views, and condemned boracic acid because it concealed the process of decomposition without preventing it. (Dr. Tidswell has verified these observations by some extremely pertinent experiments of his own.) Lingelsheim tells us that the antiseptic action of an acid is directly in proportion to the degree of acidity. This would give boracic acid a very low place on the list of antiseptics or antiferments. Kitasato writes that we should strike boracic acid out of the list of disinfectants. There is, therefore, little or no evidence that boracic acid acts as a preservative when added in the maximum amount that even Liebreich recommends (1·2 per 1000). The results of bacteriological investigations then show that boracic acid in non-poisonous doses does not preserve milk from decomposition even for 24 hours in summer heat. Yet Dr. Jamieson recommends boracic acid, so that milk may be kept sweet for a week. Is it right to advocate the use of boracic acid as a preservative for milk when it does not preserve? Moreover, there are other ways of preserving milk far better than the use of boracic acid. The use of boracic acid for this purpose is not advocated in Germany or France or England, and there is no necessity for tolerating its use in New South Wales. The Board of Health would incur a very serious responsibility if they sanctioned the use of boracic acid for such a purpose *at the factory*. The head of the family is still at liberty to use boracic acid, if he chooses to accept the views of Drs. Arthur, Jamieson, Murray Oram and Jarvie Hood; but these medical men must bear the risk and responsibility of such a recommendation. It is simply preposterous to ask the Board of Health to sanction the use of such quantities of boracic acid in the ordinary milk supply that there would be a serious risk of the wholesale poisoning of infants who chanced to be fed more or less exclusively on boracic acid milk. The very existence of a commercial undertaking, the success of which depends on the use of boracic acid as a preservative in milk, is a striking object lesson of the difference between German and Australian methods of encouraging industrial enterprise. The technical schools of Germany would not tolerate such an enterprise. The burden of proof of the harmlessness of such methods rests with those who exploit such methods. With us it would seem that such methods may be practised till experience proves them to be injurious. The experience of medical science shows that forms of slow, chronic poisoning, *e.g.*, with lead, arsenic, alcohol, etc., may be very difficult to detect until serious injury has occurred. The use of nitrites, sulphites and other salts, and of such substances as saccharine, sulphonal, and a host of drugs, among them boracic acid and borax, may produce latent, slowly progressive changes in the blood and tissues, which can only be detected by the methods of the laboratory. There may certainly be disturbances of digestion and loss of bodily health and weight, but unless these slowly acting poisons are suspected to be at work, such failure of health, because it is slow and insidious, may be attributed to any and every cause but the right one. Hence it is that we must approach the second count in the indictment against boracic acid with a full knowledge of the difficulties that beset any inquiry into the effects upon the human system of any mild, slowly acting poison like boracic acid. Is boracic acid a poison? It is a poison, according to Claude Bernard's definition, because it is an absolutely foreign body to the human organism, playing no useful part in metabolism nor in digestion. It is completely absorbed in the alimentary tract and eliminated by the kidney. Sonutae, Kister and others have shown that after moderately large doses of boracic acid, about 50 per cent. of it is eliminated in 24 hours, traces appearing in the urine a few hours after administration, but the remaining 50 per cent. is retained in the tissues for a variable time, up to six days or more. Accordingly, if such doses are taken day after day, there is accumulation of the drug in the system. Moreover, the discharge of boracic acid from the tissues does not obey the same laws as salt and urea, as flushing the tissues with liquids does not increase the quantity of boracic acid eliminated by the kidney. There is also clinical evidence that the kidneys are affected by the process of elimination—albuminuria may occur in a few days, or there may be cylindruria (casts, white corpuscles, renal cells) without albuminuria. Such a condition would escape detection by the ordinary methods of investigation. There is also an increase of urine. Boracic acid is also to be classed as a poison to protoplasm, because in large doses it may prevent the growth of germs, and even slowly kill them. In a general way, it is admitted that tissue cells are not as hardy as bacteria, which possess a cellulose coat. Any substance that kills germs is not likely to be inert towards human cells. Hence we are not unprepared for the evidence from so many trustworthy sources that boracic acid taken by the mouth in sufficient amount, with or without food, causes (1) vomiting, (2) diarrhœa, (3) interference with assimilation of the nitrogenous part of food. The investigations on this effect are extremely difficult, but both Liebreich himself (dogs fed with borax) and Chittenden (quoted in favour of the use of boracic acid) bear witness to this effect. Other authorities are Förster, Rubner and Rost. (4) Loss of weight. Kister's experiments especially indicate this loss. These effects have been observed both in man and animals. Boracic acid used as a drug, or merely as an addition to fluids for washing out cavities or canals, has often enough caused poisonous symptoms. Besides loss of appetite and impaired digestion, extensive erythema, with subsequent desquamation of the skin, has occurred in my own experience, the condition closely resembling the skin lesion of scarlet fever. Albuminuria has been observed by Kister and others. Tunnicliffe's negative results have very little value or relevance to the question we are considering. Tunnicliffe gave a child of 2½ years 7½ grains of boracic acid daily for a week, and an older child (5 years) rather larger doses for a short time. He observes, too, that such doses are far larger than the amount that would be taken by any one eating or drinking substances containing boracic acid as a preservative. I would direct Dr. Jamieson's attention to this. It is clear that Tunnicliffe repudiates the possibility of an infant taking 7½ grains of boracic acid for a single week, yet Dr. Jamieson sees no risk in any infant taking 15·20 grains for many months. The truth is that boracic acid as an agent for preserving milk is not considered to be within the range of possibility. Liebreich hardly mentions it for this purpose, and in Brouardel's address at the Madrid congress its use for such a purpose is hardly considered. A preservative that can be used in milk remains to be discovered. It must be non-poisonous in large amounts. It must be harmless for the very young and for invalids, because milk is the chief food for such persons. Even small amounts of such a poison as boracic acid should not be allowed—firstly, because it has little or no effect as a preservative; secondly, because, though a single dose may do little harm, small doses repeated for weeks and months do affect human beings and animals; and lastly, because if the law tolerates small doses it is almost impossible to prevent the addition of much larger doses by any legal processes. Accordingly it is in accordance with principles of public hygiene that the Board of Health has acted, and the medical profession should lose no time in supporting the wise decisions of this public body. I beg to move the resolution standing in my name.

After discussion, it was decided to adjourn the meeting for one week.

The adjourned general meeting of the Branch was held at the Royal Society's Rooms on Friday evening, December 18th, 1903; Dr. Brady (president) in the chair. There were 45 members present. Visitor: Dr. Kennedy, of Zeehan, Tasmania.

The **President** stated that the discussion on Dr. Wilkinson's resolutions had been adjourned on the motion of Dr. Crago. He would therefore call upon him to resume the debate.

Dr. **Crago** said he did not move the adjournment of the discussion with a view to reopening it, but simply because he had been asked to do so. He did not claim to be an authority on the subject. His experience, however, was that boracic acid tended to upset the digestive organs when continued for any length of time. He had noticed that effect upon himself, as well as upon patients for whom he had prescribed it. A case came under his care a year or two ago which made a great impression upon him as to the injurious effects of boracic acid in milk. The patient, a middle-aged clergyman, was suffering from a rather intractable attack of subacute gastritis, which did not readily yield to the ordinary remedies—bismuth and hydrocyanic acid. After a few days, on questioning the patient as to the source of his milk supply, he found that he was using a concentrated milk, which, according to the label, contained a certain proportion of boracic acid. The concentrated milk was at once stopped and fresh cow's milk substituted, and, without any change in the medicinal treatment, the vomiting almost immediately ceased. He (Dr. Crago) thought there could be no doubt that the composition of the Select Committee of the Legislative Assembly was favourable to the company in whose interest it was appointed, and that for the most part only those medical witnesses were called who were known to hold views agreeable to the object to be attained. The resolutions of the Departmental Committee of the Board of Agriculture allow ·25 per cent. of boracic acid in cream, ·5 per cent. in butter, but absolutely prohibit the use of it in milk, or in any dietetic preparations intended for the use of invalids or infants. (See *Medical Annual*, 1902, p. 660.)

Dr. R. S. **Bowker** spoke against the resolutions, and moved the following amendment:—"The omission of the words 'or concentrated' and 'or even in milk products.'"

Dr. **Jamieson** seconded the amendment, and said the wording of the amendment would show that he was quite in accord with Dr. Wilkinson when he says that the *daily* supply of milk should be absolutely free from preservatives. Who would drink preserved milk when he could readily obtain the fresh article? But because they were bent upon having their daily supply free from preservatives, was that any reason why they should deprive those who cannot get a fresh daily supply from having that supply which they have had in the past, and with which they are quite contented? It may be said by some that such people should rest satisfied with condensed milk. In reply to such, he would say that such milk was to many people distasteful. The sweetened variety, moreover, contains such large quantities of sugar as to make it most unsuitable for dyspeptics, and the unsweetened, unless consumed at once, soon became sour. They all knew it was not possible for ships to carry a sufficient number of cows to supply their passengers and crews with fresh milk, and they had been compelled to carry supplies of concentrated or condensed milk. The concentrated milk used for this purpose was manufactured this way:—The milk was drawn with proper precautions to ensure absolute cleanliness in every detail. Each farm supplying the company was fitted with a cooler, and the milk is rapidly cooled immediately it is drawn. It is then placed in sterilised dust-proof cans, and immediately sent to the factory. As soon as it arrives at the factory it is tested for acid fermentation, and if free from evidence of such, is at once "pasteurised" for 20 minutes at 160° F. Boracic acid to a maximum amount of ½ per cent. (35 grains to the pound) is then added. From the pasteurising vat it is syphoned off into vacuum condensing pans, where the water is removed to the extent desired. From these pans it is drawn off over coolers to cans and tins, in which it is sealed hermetically, and is thus ready for the market. Prepared in this way it will keep sound and fresh for from 7 to 12 days, the combined concentration and boric acid treatment effectually preserving it against both fermentative and putrefactive organisms. A label is attached to the tins containing proper directions as to how it should be diluted, and stating also that it contains 35 grains of boric acid to the pound. This, then, was one of the preserved forms of milk that they were asked to condemn, and the countenancing of which is characterised by Dr. Wilkinson as "tantamount to giving legal sanction to the wholesale poisoning of infants who take ordinary quantities of such milk." This milk, when diluted, contains boric acid in the strength of 1 in 1000 (*i.e.*, about 7 grains per pint). It is largely used in ships engaged in the coastal traffic, and in the trade between here and New Zealand and the Pacific Islands. Dr. Wilkinson has brought forward arguments by certain German authorities to the effect that boric acid is a *poisonous* substance, and that even in the small doses used in milk is injurious to health. Boric acid was no new thing in the way of a preservative, for it had been largely used for this purpose since 1861, and surely if the assertion that it is a poison were true, they would have had abundant evidence of it long ere this. Dr. Wilkinson, however, "declined to recognise ordinary general practitioners such as those who had given evidence as competent witnesses." He prefers "the cold atmosphere of the laboratory, where logical (!) conclusions are drawn from careful experiments designed to prove the value and safety of boric acid." In other words, he preferred the experiment conducted in the test tube or in one of the lower animals to the careful and precise observation of the well-trained practitioner of medicine—*in corpore vivo*. And when such practitioner makes statements with which he, forsooth, does not agree, he accuses him of "exhibiting gross ignorance or strange personal bias on the questions at issue." It was not, however, on the testimony of the general practitioners alone that he relied for proof of the harmlessness of boric acid, but on the evidence given before the departmental committee appointed by the House of Commons by a host of skilled witnesses, who testified in no uncertain terms to the harmlessness of this substance. It might, however, be urged by Dr. Wilkinson that these men also were "engaged in a conspiracy against infant life." He would refer Dr. Wilkinson to the evidence given by such men as Tunnicliffe, Rosenheim, Professor Attfield, Dr. Robert Hutchison, Rideal and Foulerton. Of these witnesses, two (Professor Attfield and Dr. R. Hutchison) conducted experiments upon themselves, taking large amounts, viz., from 60-100 grains per diem without producing any harmful result whatever. Rideal and Foulerton, after careful experiment, concluded that in a strength of 1 in 2000 boric acid was an efficient preservative of milk for 24 hours, and neither affected the digestibility of the food nor the digestion of the person taking it (*vide* Public Health, May, 1896). After taking very voluminous evidence upon the subject, the British Commission made, among others, the following recommendation: "That the only preservative which it shall be lawful to use in cream be boric acid or mixtures of boric acid and borax, and in amount not exceeding ¼ per cent. expressed as boric acid. The amount to be notified by label upon the vessel." No mention was made of concentrated milk, because that question was not discussed by the committee. If, after having gone thoroughly into the question in England, they were prepared to adopt such recommendation, surely it was quite sufficient for them to follow their lead instead of blindly following the drastic procedure recommended by the Germans. The English-speaking people have always been remarkable for their sound common sense, and have always relied more upon known facts than improved theories, and in this matter they have shown no exception to the rule. Was it to a German that they owe either anæsthesia or antisepsis? Dr. Wilkinson has referred to Leibreich, and remarks that he (Leibreich) "would stand aghast at the cool misrepresentation of his opinions as given by those who gave evidence before the local Select Committee." With their permission he would, in conclusion, quote from that authority, and from what Dr. Wilkinson had said he felt sure that he was absolutely ignorant of Leibreich's views as expressed in his second treatise on "The Effects of Borax and Boric Acid on the Human System." He had the good fortune two days ago to obtain a copy of his second treatise upon the subject, published in Berlin in 1902. In combating the statement made by Kister in his experiments on fowls, that boric acid acts prejudicially on the kidneys, he says: "Weak and disused kidneys bear borax and boric acid particularly well; in fact, they form remedies of great value in kidney diseases, as Virchow's own case shows. Moreover, in the animal experiments there was no trace of any disturbance of the function of the kidneys." It may be at once stated that statements generally referring to boric acid apply equally to borax (biborate of soda), as boric acid circulates in the human body as biborate of soda. Further on he states: "And no visitation of the kidneys was ever observed in later experiments; on the contrary, medical practice still successfully maintains that borax and boric acid are *soothing preparations*." And again: "From these experiments on animals it may be deduced that borax is entirely innocuous as regards the functions of the kidneys." From the clinical side we have evidence in favour of its innocuousness from no less an authority than Professor Posner, who in a letter to Prof. Leibreich writes thus: "Boric acid is in continual use in urological practice, being chiefly used for irrigating the bladder. For several years we have chiefly used concentrated boric acid solution in water, partly as a remedy for slight cases of cystitis (especially those caused by coli-infection), and partly in the preparatory irrigation necessary for operations with the cystoscope. I may say that in thousands of irrigations performed by me personally, no symptoms pointing to poisoning have ever been observed, although there have frequently been cases of catarrh of the bladder, deprived of the epithelium in which absorption is very possible. We do not shrink from irrigations of the renal pelvis with boric acid, neither has a case of poisoning come to my knowledge here. Of all the antiseptic remedies at our disposal boric acid is considered the most innocuous." After dealing with the objection that boric preparations are cumulative—which objection he conclusively proves does not hold—he adds: "The above-named investigations offer a further proof that borax and boric acid are substances which cause no injury to health when judiciously taken." These remarks were from Leibreich, who, according to Dr. Wilkinson, "would stand aghast at the misrepresentation of his views as stated by those who gave evidence before the Select Committee in Sydney." In a supplement to this treatise he points out that borax and boric acid have been in use as preservatives for over 40 years. In this supplement he deals with the conclusions drawn by Rost and Rübner especially, who stated that boric preparations caused a decrease in weight when taken by human beings. No more convincing proof to the contrary could be wished for than that afforded us by the unwilling experiment of Drs. Robert Bowker, Maitland and H. Marks, who, while out camping a short time ago, fed largely on boracised concentrated milk, and who all gained weight considerably thereon. For further evidence upon the fallacious conclusions of Rost and Rübner I would refer those who are specially interested to the pamphlet itself. The experiments of Tunnicliffe and Rosenheim, a detailed account of which may be found in the report of the British Departmental Committee, also completely disprove these assertions of Rost and Rübner. Dr. Leibreich points out the chief opponents of the use of boron preparations have been medical men who may be designated "*purists*," *i.e.*, those whose principle it is that no preservative whatever should be added to food. Theoretically, such a view expresses an ideal state of things; but the question was, was it either wise or practical to aim at such a high state of excellence? It behoved them to take a common sense view of the matter, and not be carried away entirely by the purely theoretical aspect of it. As Leibreich puts it, "It is altogether inadmissible to reject substances which experience has proved innocuous, and in consequence of isolated scientific examinations or isolated observations." In a second supplement to his work, Leibreich says: "It would have been better to have acted in the same way as was done in England. There 78 experts were examined, and their opinions published, so that scientific opinion could be formed. The result of the inquiry was that the addition of borax to foods other than ordinary milk may be allowed within certain limits." They, on the contrary, were asked that night to advocate the absolute prohibition of preservatives, not from ordinary milk only, but from "all milk products." In this second supplement, Leibreich deals very effectually with Rost's experiments, designed to prove that boron preparations produce greater intestinal ill effects. Some of the experiments of Rost, especially those on vomiting after the use of boric acid, afford most amusing reading, and the fallacies they contain are clearly pointed out. To go into all the evidence would take up too much time, and so he would refer those who were specially interested to Leibreich's pamphlet itself.

Dr. **Power** also supported the amendment.

Dr. **Arthur** spoke against the resolution, and moved a further amendment, which was not seconded—"That all foods containing preservatives shall have the amount and nature of the substance notified upon the label."

Dr. **Kennedy**, of Zeehan, Tasmania, gave his experience upon the use of concentrated milk by a mining population, and showed that the use of such milk had not been injurious.

Dr. **Tidswell** said that until a few years ago he had been in this dilemma with respect to boric acid: that whilst his clinical training was to the effect that boric acid was a comparatively harmless substance, his hygienic training was to the effect that its use in food was injurious and to be uncompromisingly condemned. With all due deference to the knowledge of members present, he supposed this vague position to be that now occupied by medical men who had not specially studied the subject. At all events it had been his own until he was called upon, as a matter of official duty, to determine the point one way or other. To this end he had collected a considerable amount of evidence and given that evidence a considerable amount of attention with the sole purpose of arriving at the truth. He ventured to claim the indulgence of members so far as to lay before them what he believed to be the important issues of his enquiry. With respect to the injurious effects of boric acid, there was no need to rely upon the views of any one authority; he had found an abundance of testimony, both experimental and clinical, by numerous writers. The inferences which had been drawn from experiments had varied with different observers, and on the inferences alone it was difficult to arrive at a clear cut conclusion. But the actual evidence submitted by investigators was perfectly clear and almost unanimous upon one point, namely, that boric acid was not harmless; it could cause injury and even death if administered in large enough amounts. The clinical evidence showed that as regards adult human beings injurious effects had been caused by the medicinal use of the drug. Dyspepsia, nausea, vomiting, diarrhœa, erythematous, papular, vesicular and pustular skin eruptions, renal irritation, albuminuria, and even hæmaturia, had been reported regularly enough and often enough to be now recognised as the symptoms of boric acid poisoning. Most often they had appeared in consequence of the use of lotions, dressing, etc., but instances of such untoward effects were reported to have followed the internal administration of the usual twenty or thirty grains a day. It had therefore seemed to him that whatever be the regular or usual behaviour of the drug, it cannot be doubted that it possesses the power of causing injury in ordinary amounts. So far the aspect of the matter is one with which we are all familiar, or could be with a little trouble. But if boric acid is to be given to us in our daily milk, we should be subjected to its influence during a much longer period than we have hitherto had any record of, and we are not at all in a position to estimate its possible effect under such circumstances. We know of certain drugs, alcohol, arsenic, opium, lead, whose immediate effects in reasonable doses are no more manifestly toxic than those of boric acid, but whose long continued use in such doses is accompanied by irreparable injury by way of minute structural changes in the tissues. We know boric acid irritates the tissues, *e.g.*, the renal tissues, modifying the flow of urine, causing albuminuria, etc., and must suppose a long continuation of such action is not likely to be without ultimate damage to the organs. In this respect we have a factor of unknown degree to reckon with, and the analogy of the other drugs cited suggests the prudential course of avoiding the possible risk. But apart altogether from what seem to be the clear indications afforded by what has been said, it is a fact that, although the practice of adding boric acid to milk has been in existence for years, there are few records of its having had what may be called an epidemic influence. He had been able to find only three such records, and these, though so much positive evidence, seem to fall short of what might be expected. He could not, however, regard these records as representative of actual occurrences. The minor ill-effects would not come under the notice of medical men; moderate degrees of gastro-intestinal irritation, or even the skin eruptions, would either not be enquired into or assigned to other common causes; the possible finer effects would not be attributed to boric acid. In hospitals patients do not stay long enough to exhibit the ill-effects in an epidemic fashion, and in asylums, where the patients remain longer, they would be less likely to attract attention. Moreover, in such institutions the milk supply is most often specially arranged for and, perhaps, specially scrutinised, and thus less likely to contain boric acid. Still further, the effects are not so violent as to attract attention, as ordinary epidemics do. Valid epidemiological evidence is not usually obtained, save by special effort, and so far as boric acid is concerned this special effort had not yet been made. It is doubtful whether it would succeed even if made, for, as already stated, we are not yet possessed of full knowledge of the finer effects of long-continued ingestion of boric acid. In view of these several and very real circumstances he could not regard the absence of recorded testimony as evidence that injurious effects had not occurred more often than was known. He thought the profitable sale of many patent nostrums depended upon just such a lack of decided evidence of their injurious effects. However, even allowing due weight to the negative contention referred to, it did not, to his mind, suffice to remove the suspicion which positive facts attached to boric acid. He was, however, not prepared to determine the question at issue on the point of injury to health alone. There were other aspects which must be taken into consideration. The addition of boric acid to milk was made by the trader, and presumably for his benefit; it was necessary to enquire what he hoped to gain by it. As everybody knew, normal milk became sour and curdled in a period which varied according to circumstances. For purposes of discussion he would assume the milk became decidedly sour in 24 hours and curdled during the succeeding 24 hours. The souring was due to the formation of lactic acid and the curdling due to precipitation of caseinogen by the acid so formed. Soon after curdling moulds appeared in the milk, and later still it putrefied. This was the ordinary sequence of events. He need not say the changes depended on the action of bacteria—the souring upon the lactic bacteria, the putrefaction upon saprophytic bacteria. The striking fact to notice was that although both kinds got into milk at the same time, namely, with the dust and dirt of the dairy, yet the souring invariably preceded putrefaction, the latter being sometimes deferred for days. This striking feature was owing to the special behaviour of the lactic bacteria in milk. Initially, both lactic and saprophytic species began to grow, but the conditions were so pre-eminently suited to the lactic bacteria that they very soon outstripped the others. Moreover, they formed acid and so rendered the medium unsuitable for many saprophytes. The special growth of the lactic species, combined with the formation of lactic acid, gave the lactic species such an advantage that they practically crowded out the saprophytes. These lactic bacteria went on growing up to and after the milk had curdled, at this time being in more or less exclusive possession; but in the end the acid they formed smothered them, so to speak, and they in turn died out. These various events were signalised bacteriologically by increase of numbers up to curdling and for a time afterwards, accompanied by a decrease in variety; then when the lactic species died there was a decrease in numbers. He had known milks to show this reduction to the extent of becoming absolutely sterile, but more usually there were survivors of the lactic action, in variable amount, sometimes comparatively few, sometimes pretty numerous. These survivors were the saprophytes which had been restrained but not killed by the lactic species and by the acid. They had been making but slow progress against the odds, but after curdling the odds were lessened. The lactic bacteria were out of the way, and the acid no longer produced. On the other hand, it became reduced, partly perhaps by the moulds, and partly by unknown causes. With the reduction of the acidity the saprophytes began to increase, and aided no doubt by others from the air set up the changes we know as putrefaction. This process, though slow in milk, was essentially the same as in other organic fluids. From this outline of the facts it would be apparent that the operations of the lactic bacteria—the souring of milk—protected it from putrefaction. This was a most important and beneficent thing, since it prevented milk operating as a source of toxic poisoning from albumoses or ptomaines such as were sometimes formed during incipient putrefaction. Failing souring, putrefaction would occur directly in fresh milk as it did in contaminated boiled milk where the lactic species had been destroyed. He thought it impossible to over-estimate the hygienic value of the well-known souring and curdling as a warning against the consumption of possibly dangerous and, at all events, stale milk; a warning the more valuable in that sour or curdled milk was not in itself injurious. These facts and their signification were insisted upon by most recent writers, and so might be accepted without question. But he would now call attention to the modifications produced by boric acid, and in doing so desired to submit that what he had to say was based entirely on his own observations; he had found no reports dealing with the matter. He had found by adding various quantities of boric acid to milk which was left exposed to air, as in an ordinary jug, that in this climate it required about ten grains per pint to materially delay souring and curdling, say to cause a delay of 24 hours. This applied to moderate weather; in the heat of summer 20 grains per pint, or even more, were necessary for the same purpose. With 35 or 43 grains per pint he had not observed souring and curdling within a week. Notwithstanding this delay in souring and curdling, he had not found the numbers of bacteria to be less in boricised than in the control unboricised samples examined side by side with them. On the other hand, if the specimens were examined at the time the control curdled, the still-fluid samples containing 10 or 20 grains of boric acid per pint contained two or three times as many bacteria as the control. It was very apparent that these amounts of boric acid exercised no restraint over the multiplication of the bacteria in the milk. Indeed, members knew quite well that boric acid was too weak an antiseptic to do so in the quantities added. He supposed that in these instances the greater numbers of bacteria that were present in the control are due to the development of putrefactive bacteria alongside the lactic bacteria, the latter being merely restrained, since curdling though delayed still occurred. When the boric acid added amounted to 35 to 43 grains per pint the number of bacteria in the boricised milks was about the same as in the controls at the time the latter curdled; but they were obviously not the same species, since the control curdled whilst the boricised sample did not. Another point about these boricised milks was that they putrefy earlier than the control milks. In the 10 to 20 grains samples putrefaction seemed to proceed synchronously with the slow development of lactic acid, and the curd when formed was often a more or less putrid curd, not the clean curd of fresh milk. In the case of the 35 or 43 grain samples, putrefaction occurred without souring or curdling; such samples sometimes became thin, bluish, and very foul in the course of a few days All this, he thought, was only what might have been anticipated if the poor germicidal power of boric acid were remembered. The only special point was the interference with the lactic process, and he was not yet in a position to state positively whether the interference with this was due to restraint of the growth of the lactic species or to prevention of their ferments acting upon the lactose. It was known that boric acid did interfere with the digestion of carbohydrates by enzymes, and possibly something of the same kind was in operation with respect to the milk sugar. If the lactose remained unaltered there would be no lactic acid formed; thus one, and perhaps the principal, check over putrefaction would be abolished, and the saprophytes would overwhelm the lactic species, instead of the reverse process that occurred in fresh milk. He already knew this milk sugar remained unaltered for some time when 35 grains of boric acid per pint was added to the milk, but would prefer to make further observations before forming a decided opinion upon the exact process. In the meantime it appeared clear that the addition of boric acid tended to reverse the normal changes in milk. The delay in souring and curdling benefited the trader because it prolonged the period during which the milk remained in a saleable condition. But it had no advantage for the consumer; on the other hand, it deprived him of the valuab'e indication of staleness, of the warning against toxic possibilities, which curdling afforded. He was exposed to risk because such milks, overladen with objectionable bacteria, would still be consumed at a period when the curdling of pure milk would have led to its rejection. From the bacteriological point of view, therefore, he had been obliged to regard the addition of boric acid to milk as being extremely undesirable, to say the least of it. Incidentally he would point out that the quantities of boric acid necessary to preserve milk in this climate were by no means as small as was commonly supposed. With 10 grains per pint, an invalid on three pints would get 30 grains per day, a quantity which had produced injury as already mentioned. He could not view with equanimity the prospect of an infant taking a pint of milk, receiving with it the excessive amount of 10 grains of boric acid regularly every day. Taking still another aspect, he would further point out that the addition of boric acid to milk was unnecessary from an economic point of view. That the drug was only added to a minority of market milks was sufficient evidence that the business could very well be conducted without it. With respect to the concentrated milk of which they had recently heard so much, he had satisfied himself that the pasteurisation and concentration to which it was subjected would not in themselves effect the preservation necessary to render it a marketable product; some preservative such as boric acid was required in addition. But he did not think the welfare of this particular milk was so important as to justify exceptional consideration, more especially in view of the use of so much as 35 grains of boric acid per pint. It had been stated that the recommendations of the English Departmental Committee did not apply to this milk, because they had not had such milk under their consideration. But it was as well to remember that it had been very carefully considered by our own Board of Health. He was in a position to say that there had been a voluminous correspondence, as well as numerous interviews, and that the representatives of the company had appeared in person before the Board to urge their views. The Board had nevertheless decided that they could not exempt this particular product from their regulations. He imagined the Board would be regarded as a competent authority, and one whose motives were above suspicion. The mention of butter and cream were beside the point; the article under consideration was milk, intended and directed to be used in precisely the same way and for precisely the same purpose as fresh pure milk. What applied to other milks applied also to it. He could see no reason for exempting it, more especially as there were plenty of other non-boricised preserved milks to meet the wants of those who could not obtain fresh milk. Finally, if he might trespass still further upon the patience of members, he would like to refer to the moral aspect of the matter. The addition of water to milk was a punishable offence; the addition of boric acid was equally an adulteration. In the one case the customer was imposed upon by a weakened article; in the other case by a stale one. It was surely to his prejudice that he received a manipulated article when he asks and pays for milk, and undoubtedly expects to get pure milk. The ability to add boric acid with impunity is calculated to be subversive of the salutary regulations designed to secure the safe and cleanly handling of an important article of food. To keep fresh milk in a marketable condition requires care and cleanliness in its collection; if the dairyman can cover up neglect in these particulars by throwing a handful or so of preservative into his churn of milk, he is not likely to furnish his product in that state of purity which we all consider should be an essential character of it. Yet, again, we must always remember that this drug, under such circumstances, is not being given by a physician or other responsible person, nor even with the consent of the person taking it, but by a trader who has no knowledge of it beyond the fact that it suits his purpose, who is indifferent to whom it goes, and who, in short, is under no responsibility in the matter. Labelling does not cover this defect; many persons living or feeding in restaurants or hotels would not see the label, and if they did they are not in a position to discriminate between the influence of 5 grains or 50 grains, nor any other quantity of boric acid. The view of the community would be that if there were any danger their public officials would not have allowed the drug to be added. He did not think the community would tolerate any such practice if they realised that its sole purpose was to pander to commercial greediness. He felt he owed members an apology for such a very long speech; but whilst they as medical men were in a position to judge as to the injuriousness or otherwise of boric acid, there were other aspects of the matter which occurred to the hygienist, and which he desired to lay before them in justification of the attitude which he as a public officer had been obliged to adopt in this matter. He had been led to believe that the addition of boric acid to milk was a practice not only possibly injurious, but clearly undesirable, decidedly unnecessary, and morally pernicious. Moreover, it was one that was neither sanctioned nor adopted by the majority of milk traders. He thought the less scrupulous minority merited condemnation. At all events he felt it a matter of professional obligation to lay these views before them, and whether members agreed with him or not he trusted that he had at least afforded them sound reasons for the position he had been obliged to take up. He thanked members for their patient and indulgent hearing.

Dr. C. W. REID also spoke in favour of the resolutions.

Dr. WILKINSON then replied, and suggested the omission of the third resolution.

The amendment was then put to the meeting and negatived.

The following resolutions were carried, with only four dissentients:—

"1. That in the interests of public health, neither boracic acid nor borax should be used as a preservative in ordinary or concentrated milk, or even in milk products.

"2. That this resolution should be communicated to the State Government and the City Council through the proper channels."

Council Meeting.

THE Council met at the Association Rooms on Wednesday, 30th December, 1903. Present—Drs. Brady, Crago, Hinder, Dick, Abbott, Hankins, Newmarch and Fiaschi. Apologies were received from Drs. Pockley, Beeston and Rennie.

Minutes of the previous meeting were read and confirmed.

Member Elected.—Dr. R. W. Schütte, Merriwa.

Balmain Medical Dispensary.—Correspondence was read. Resolved—"That owing to the refusal by the Balmain Dispensary of the conditions proposed by the Council and the local medical society, the medical officers of the Balmain Dispensary be informed that all medical officers continuing service in the Balmain Dispensary will be posted after one month's date, as from 8th January, 1904."

Letter was received from Dr. Knaggs *re* his books and property in the library. Resolved—"That Drs. Crago and Hankins be authorised to purchase what is considered necessary for the use of the branch from Dr. Knaggs' library."

Letter from a member *re* a question of medical ethics. Resolved—"That the member be informed that on the evidence before the Council he should have retired from the case upon the arrival of the other practitioner."

Letter from Drs. Lester and Hawthorne, of Mudgee, complaining of certain actions of the committee of the Mudgee Hospital. Resolved—"That Drs. Lester and Hawthorne be informed that the Council cannot interfere in the matter."

Letter from a member with reference to a private list. Resolved—"That the question of starting a private list cannot be entertained."

Branch Subscriptions.—The Home Association be written to suggesting that the branch subscriptions be £2 2s.

The HON. TREASURER reported that he had received a letter from the Secretary of the British Medical Association with reference to the discontinuance of *British Medical Journal* to certain members.

Some accounts were passed for payment—GAZETTE, £48; envelopes, £2 8s 6d; clerical, £5; stamps, £1 9s 7d; printing, 13s 6d; refreshments, £1.

The HON. TREASURER reported the following credit balances:—General account, £183 14s 3d; GAZETTE account, £103 3s.

Victoria.

THE annual meeting was held on Thursday, December 17th, at 21 Spring-street, Melbourne. The President (Dr. Gresswell) was in the chair.

The election of office-bearers for 1904 was as follows:—President, Dr. Weigall, M.B. *et* Ch.B. (Melb.); vice-president, H. W. Bryant, L.R.C.P. & S E.; treasurer, George Cuscaden, L.R.C.P. & S.E.; secretary, W. B. Vance, M.B., Ch.B. (Melb.). Council: Drs. Neild, Gresswell, Willis, Henry, Fox, Macansh.

The Council's report for 1903 and the treasurer's financial statement were read and adopted.

The retiring president (Dr. Gresswell), who had been approached to take a second year in the chair, addressed the members, and explained that owing to ill-health and other onerous duties having to be undertaken by him in his position as Chairman of the Public Board of Health of Victoria, he was reluctantly obliged to retire from the presidentship of the B.M.A. He thanked the secretary and the members of the council for the loyal support they had given him during his year of office, and hoped still to be able to assist the Branch in every way he could. He congratulated Dr. Weigall on his appointment to the position of president, and was sure that the Branch would be greatly benefited by the appointment.

Dr. WEIGALL replied, thanking the members and the retiring president, and only hoped that he would be able to help the Association as well as Dr. Gresswell had, and expressed his sorrow that Dr. Gresswell had not been able to continue another year in office.

REPORT OF COUNCIL.

Your Council, in presenting the annual report to the members of the Victorian Branch of the British Medical Association, desires to congratulate them on the steady, though necessarily slow, progress which the Branch has made during the year. Death has during this period robbed the Branch and the profession of several who could ill be spared. When men like Ross (of Dimboola), Ritchie (of Horsham), Palmer (of Ararat), and Walsh (of Kew) are taken they leave a gap which is not easily filled. Early in the year the members were annoyed by receiving circulars from the General Secretary asking for their subscriptions. Your Council have the pleasure to inform you that as the result of a united protest from the Australian Branches such a circular will not be again issued. The recent alterations in the by-laws of the Association has abolished what were formerly called unattached members. All members of the British Medical Association now must belong to the Branch in the district in which they reside. The subscription under these same regulations was fixed at 25s per annum. As it would be impossible for us to supply members with the *Australasian Medical Gazette* for this amount, your Council obtained the permission of the other Branches to invite the Council of the New South Wales Branch to approach the parent Council so as to allow the Australian Branches to fix the annual subscription at such a sum as they might agree on. The New South Wales Council agreed to do this, and the matter is now under consideration. Your Council approached the New South Wales Council asking them to move in the direction of having annual biennial or triennial meetings of the various Branches of the British Medical Association in the several States. It was, however, deemed best that as the date of the next Congress had been fixed the matter should lie in abeyance till then. Matters of more or less interest have engaged the attention of your Council during the year, one of the most important being the consideration of a circular from the Hon. the Premier *re* a circular received from the Colonial Office regarding cancer research. Your Council, after mature consideration, forwarded to the Hon. the Premier how in their opinion the worthy object might be helped. Your Council have pleasure in informing you that no charge of an ethical nature had to be investigated during the year. The papers and demonstrations at the monthly meetings were of more than ordinary interest. Your Council, on behalf of the members, wishes to accord to the authors their sincerest thanks for the time and trouble they gave in their preparation, and at the same time regrets that the attendance of members was not always what it might have been. Your Council would at this juncture urge members to be more regular in their attendance at the meetings, as it is only by the cordial support of the general body of members that your Council can obtain that necessary standing and authority so essential to the safeguarding of the interests of the medical profession. We are pleased to note the very satisfactory progress made during the year by the Ballarat and Western District Branches. We, however, regret that the Launceston Branch is still in a state of suspended animation, but trust that an endeavour will be made during the year to restart afresh. In conclusion, your Council wish to tender their thanks to the President, Dr. Gresswell, for his untiring interest in the Branch, and regret he could not see his way clear to again fall in with the wishes of the Council to hold office for a further term. To Dr. Neild our best thanks are also due for his kindness in allowing us to meet at his house for our Council meetings. Your Council, in wishing the members the compliments of the season, hope that during the forthcoming year prosperity both for the Branch and members may be the rule.

(Signed) D. A. **Gresswell**, President.
W. B. **Vance**, Hon. Sec.

TREASURER'S STATEMENT.

Receipts.

Members' subscriptions ..	£278	8	6			
Interest	4	10	0			
				£282	18	6
Balance				4	17	5
				£287	15	11

Expenditure.

B.M.J. and *A.M G.*	£238	16	0
Printing and stationery	21	6	0
Postage	3	3	2
Rent	8	0	0
Sundries	13	9	0
Bank charges	3	1	9
	£287	15	11

Assets.

Deposit, Bank Australasia	£154	10	0
Current account credit	16	0	8
Trust account (Tasmania)	19	6	0
	£189	16	8

Liabilities.—Nil.

Audited and found correct.
16/12/03. **Richd. W. Black**, Auditor.

Geo. Cuscaden, Hon. Treas.
17/12/03. D. A. **Gresswell**, Pres.

Ballarat.

The ordinary meeting of this Branch was held at the Ballarat Hospital on Saturday evening, November 28th, at 8.30.

Present: President (Dr. Usher), Drs. Champion, Courtney, Donaldson, Gardiner, Lidwill, Martin, McGowan, R. Scott, Showman, Sloss and Steell.

Apologies: Drs. Jordan, Mitchell and Salmon.

Correspondence.—Dr. Affleck Scott and Mrs. Chisholm Ross, Drs. Cowen, Cuscaden and Officer. Received after the minutes of the previous meeting had been read and confirmed, on the motion of Drs. McGowan and Lidwill.

Dr. **Courtney** read a paper, "Some Notes on Eclampsia," and laid special stress on the importance of a purely milk diet in the treatment of cases which threatened to become eclamptic.

Dr. **Gardiner** read a paper on "The Relationship of Tuberculosis to Miners' Disease in Ballarat," and mentioned how difficult it was to get reliable information owing to the want of precision in filling up death certificates.

The discussion on the relationship of the profession to unregistered practitioners was, on the motion of Drs. **Showman** and **Champion**, postponed to a date to be fixed by the Council.

The meeting then terminated.

REVIEW OF CURRENT MEDICAL LITERATURE.

OBSTETRICS AND GYNÆCOLOGY.

The Treatment of Placenta Prævia by Bossi's Method.

De Paoli (*Archiv. für Gyn.*, 1903, Bd. lxix., hf. 1, p. 12) records 19 cases treated by Bossi's method. The time occupied in emptying the uterus varied from 5 to 25 minutes. In no case was there any laceration of the cervix requiring suture, though in some instances there was no dilatation at the beginning of the operation. One mother died and three children were lost out of 19 cases. The fœtus was delivered by turning or forceps, after dilatation up to 8-9 c.m. with Bossi's instrument. The writer summarises his conclusions :—

1. Cæsarian section in cases of placenta prævia is inferior to dilatation by Bossi's instrument.
2. In other cases, when the mother's life is in danger, this method gives the best chance of saving not only the mother but also the child.
3. When serious hæmorrhage occurs, the cervix being undilated, rapid dilatation by this method is indicated not only as a preliminary to immediate delivery, but also because it often renders possible the operation of turning. There is less danger of infection with this than with other methods of dilatation.

Forcible Dilation of the Os by means of the Bossi Dilator.

Gairdner, Eric D. (*Jour. of Obst. and Gyn. of the British Empire*, October, 1903), records 14 cases which occurred in the ordinary indoor and outdoor practice of the hospital in which he used Bossi's dilator. The time taken to dilate varied from 3 to 36 minutes. The conditions necessitating operation were: Eclampsia, nephritis, abortion with hæmorrhage, contracted pelvis, acute hydramnios with anti-partum hæmorrhage, and placenta prævia. In 10 cases there was no laceration, in two a slight tear, and in two the cervix was torn. In these two the time taken to dilate was 5 and 15 minutes respectively. In three cases Bossi's four-pronged dilator was used. The eight-pronged instrument when fully closed is equivalent in gauge to a No. 13 Hegar dilator.

He concludes by stating that with the Bossi-Frommer dilator forcible dilatation of the os can be rapidly and easily performed, and in cases where the cervix has been already taken up, with scarcely any risk of cervical lacerations, provided that sufficient time be taken. Three minutes should be allowed to elapse during each centimetre of dilatation.

In cases where the cervix is not taken up, there is greater risk of doing it damage, owing to the prongs not passing completely through the internal os. This is more liable to occur when the cervix is dragged upon, and consequently lengthened by volsellum forceps being used to steady the organ. The dilator should therefore, if possible, be introduced without seizing the cervix with volsellum forceps, and when a slight degree of dilatation has been obtained the instrument should be closed and withdrawn, and an examination made before it is reintroduced, to ensure that the whole length of the cervix is being simultaneously dilated. Dilatation in these cases need not be slower than in the former cases, and can be accomplished with only a slightly greater degree of force. Forcible dilatation by this instrument is not accompanied by any greater degree of shock than is usual after any minor obstetric operation.

He concludes by saying: "The instrument, especially the eight-pronged variety, is a very suitable and desirable one in cases where immediate evacuation of the uterus is considered necessary."

The Iodine Treatment of Puerperal Sepsis.

Pryor, W. R. (*New York Med. Journal*, August 22nd, 1903, vol. lxxviii., No. 8), impressed with the futility of performing either radical vaginal or abdominal operation in this condition, curettes the infected uterus, opens broadly the posterior cul-de-sac, and packs the uterus and Douglas' pouch with iodoform gauze. He operated on 37 cases, and on 36 of these streptococci had been found both in the uterus and pelvis. In all cases but one he was unable to detect a single coccus of any kind in the second dressing, and they were absent at the third dressing in the exception.

He claims that his good results are due to the fact that the serum from the uterine wound breaks up the iodoform into methyl, and free iodine to a small extent, and that the serous membrane in the posterior cul-de-sac does so to a very large extent. The iodine is absorbed very rapidly, and a strong reaction of iodine in the urine is secured within five hours of the treatment (in certain cases within two hours). In all the operations, either enterocylis or intravenous infusion of normal saline solution has accompanied the operation to facilitate the elimination of iodine and toxines by the kidneys. The author is now engaged in elaborating a simpler method of securing local and general iodism. In all there were 37 operations; 27 had not been previously operated on, and only one died, while 10 had been subjected to curetting before the author saw them, and three died, thus confirming his belief in the mischievousness of *mere* curetting in these cases.

Phlegmasia Alba Dolens and its Treatment.

Stoure, H. M. (*New York Med. Journal*, August 15th, 1903, vol. lxxviii. No. 7), points out that although the main factor in the ætiology of phlegmasia dolens is admitted by nearly all authors to be thrombo-phlebitis yet, inasmuch as this thrombo-phlebitis frequently occurs without the lesions of phlegmasia, some other determining cause or causes must be present. He agrees with the hypothesis of Tilbury Fox that obstructive lymphangitis is the hitherto unknown factor.

When the femoral vein is plugged the congestion during the establishment of the anastomosis is so great that blood serum and red corpuscles are forced from the capillaries into the surrounding tissues. This serum has but slightly coagulable properties. Pitting is general; the swelling commences at the foot, and the lymphatics carry off the excess of fluid. If now the lymphatics fail to perform their work, lymph accumulates in the tissues, and when the blood serum comes into contact with the fibrinogen, fibrinoplastin, and fibrinferment of the lymph, a gelatinoid substance is formed similar to the transudate found in phlegmasia dolens.

The author treats his cases on the usual lines, and in addition mentions that he has found hot dry air, 400° F., for an hour to the limb, followed by massage daily, to be of great service.

On the So-called Caruncles of the Female Urethra.

Lange (M.) (*Zeitsch für Geburts, u. Gynäk*, Bd. 48, H.L.) 1. Caruncle of the urethra is one of the most common and least understood of the affections peculiar to women. For long it was described as a form of new growth, but nowadays it is gradually becoming understood that the affection is nearly always inflammatory in origin. Lange carefully examined 1000 consecutive female patients, and found in 58 of them caruncle of the urethra, which was removed and submitted to microscopic examination in every case He found that three distinct types of growth can be distinguished, and that these appear to be about equally frequent. Nineteen of the 58 growths are described as simple granulomata; these showed great and widespread infiltration, with round cells, and a remarkable number of capillaries. The vessels were frequently found to be plugged with leucocytes, which is a sign of inflammatory origin. The gonococcus appears to be a frequent cause of this variety, but not of the other two varieties of caruncle. In a second group of 19 cases the growths are described as papillary angiomata, or more precisely as hyper-vascularised papillary mucous polypi. In these there is a thick stratified epithelial covering, showing numerous papillary elevations, into which the connective tissue sends processes, simple or branched. The connective tissue is always fibrillary, and there is never diffuse round . celled infiltration. Very numerous blood-vessels are present; these are always normal in appearance, and are never plugged with leucocytes. The third group consists of twenty cases of simple angioma, or more accurately two of telangiectatic mucous polypi. In these there are numerous thin-walled vessels like capillaries, but with their laminæ notably and irregularly widened. These ectatic vessels are found in the midst of areas of connective tissue, free from round cells, and often remarkably poor in nuclei. Occasionally the vessels are so large and so close together that the tissue almost appears cavernous. Hæmorrhages are frequently observed in this variety, and cysts lined by a layer of low cubical cells are common. The epithelium is stratified and squamous, but shows no tendency to the formation of papillæ or buds.

In 32, equal to 56·8 per cent. of Lange's cases, no symptoms were present which could be ascribed to the caruncle. Where urinary symptoms were complained of Lange usually found complications; in five cases only were there urinary symptoms and no complications, and in three of these the pedicle was inserted more than an inch above the meatus. To this high insertion Lange refers the symptoms. Bleeding was observed in two cases only. The remarkable statement is made that the caruncle itself was not tender in any case; this must surely be an uncommon experience. With regard to the etiology, none of the other cases were observed under the age of 20; this he admits, however, to be possibly accidental, because in 231 collected cases 21·2 per cent. occurred under 21 years. Granuloma especially occurs between 20 and 40; the papillary mucous polypus under 40. At middle age all three occur with equal frequency. It is suggested that the papillary variety may be due to the vulvar atrophy of old women, with gaping of the urethral orifice. The author appears somewhat uncertain as to the exact relations between the gonococcus and the vascular caruncle.

Retro-Displacements of the Uterus and their Treatment.

Baldy, I. M. (*New York Med. Jour.*, July 25th, 1903, vol. lxxviii., No. 4). The author thinks that, as in the case of ascites, a time will come when men will be ashamed to speak and write of retro-displacements as a distinct disease. They are mostly coincident with other lesions, and where such is the case the symptoms almost universally come from the associated disease. The most common disease with which displacement of the uterus is associated (in fact, often causing the displacement) is inflammatory disease of the pelvis—child-bearing, neoplasms and traumatisms causing the greater part of the remainder. The "treatment of retro-displacements" is a misnomer, and it should be "the treatment of conditions in which retro-displacements occur as an incident," as years of abdominal surgery have taught in most of these cases the displacement itself can be ignored, and the result will be perfectly satisfactory. Just as the clamp was used for the treatment of the stump in the removal of ovarian and fibroid tumours in time gone by, to be succeeded by the ligature, so will evolution in the surgical treatment of retro-displacements take place till Alexander's operation, hysterorrhaphy, ventro-suspension, and similar operations have become history.

Dr. Baldy thinks that a safe and final substitute will be found in intra-abdominal operations on the round ligament. The only objection which can be advanced against the operation is the danger of opening the abdomen, and the author states that "with anyone who sees this as a serious danger or objection under the circumstances I do not care to discuss the subject. I simply have no faith in his surgical skill and judgment."

The operation advocated consists in forcing a pair of forceps through the broad ligaments on each side of the uterus at a point near that organ. The point comes out on the anterior surface just under the round ligament, and half an inch from its attachment to the uterus. The round ligaments are then pushed into the bite of the forceps, which are then drawn back, bringing the round ligaments with them through the holes. The ligaments are then brought together behind the uterus by a stitch, so forming a loop. The uterus is then held forward as far as possible by the assistant, and the loop of round ligaments is sutured to the posterior surface of the uterus at the level of the internal os.

He refuses to discuss the use of pessaries, and states that where they appear to relieve symptoms tampons would do just as well, and concludes that if one was to balance all the possible good from the use of pessaries with the harm done by them, there would be no question but that it would be better for women if the profession could forget there was such a thing as a pessary.

Researches on the Condition of the Blood in Cases of Ovarian Cyst.

Bender (*Rev. de Gyné, et de Chir. Abd.*, July and August, 1903, No. 4). The author has made a careful microscopic study of the blood from 23 cases of ovarian cyst of different sorts, and comes to the following conclusions:—

1. An examination of the blood enables a diagnosis of malignancy or non-malignancy to be made in a large number of cases of ovarian cyst. Associated with clinical signs this blood examination always enables a diagnosis to be made between malignancy and non-malignancy.
2. When, with a normal number of red blood discs, there is a number of leucocytes varying from 6 to 8000, the cyst is certainly benign.
3. The presence of a leucocytosis, together with a normal proportion of red discs, does not allow a positive diagnosis of malignancy to be made.
4. A diminution in the number of red discs coinciding with a well-marked leucocytosis ought to raise a suspicion of malignancy.

NEUROLOGY AND PSYCHIATRY.

Relief of Pain in Tumours of the Brain.

Browning (*Journal of Nervous and Mental Disease*, November, 1903) remarks that in view of the hopeless nature of this class of case, and the fact that in only a few cases can anything be done surgically for the relief or cure of the condition, any addition to our methods of treatment for the relief of suffering must be welcomed. The X-rays have been found in some cases to numb the pain, but hitherto we have been obliged to fall back on opiates in some shape or other, but there are serious objections to their continued use, since they obtund consciousness and increase constipation, thus rendering the pain in the head often much worse. The author suggests the use of the vascular agents (whether to increase or depress blood pressure), and maintains that these are rational remedies. He administers such depressants as aconite, veratrium, or gelsemium, in doses sufficient to soften or control the pulse. The remedy can be continued as required, though the condition of the circulation should be frequently observed, and the amount of the drug regulated according to the necessity of the case and the way it is borne. The dosage in any particular case is kept where it does not dangerously reduce the pulse on the one hand, and yet controls the pain. This plan, although it may not at once completely stop the pain, yet holds it in check, and it appears to accomplish as much as symptomatic trephining. The thoroughness with which the pain can be relieved will, of course, depend in any case upon the cause of the pain. The source of the pain can be traced to at least three factors: (1) The local and more or less general increase of intra-cranial pressure, as occurs most typically in intra-substantial growths. Where the pain is thus directly due to pressure it takes the form of a dull constant ache, and in this form marked relief may be expected from this method of treatment. (2) The paroxysmal augmentation of arterial pressure in certain cases. This is the cause of the severe pain seizures, for which opiates fail to do much except to stupefy, and in which the depressants do must good. (3) The pain may be due to the direct implication of or stretching of nerve structures, such as the meninges or the outgoing nerves. In these cases the good to be realised from the depressants may be only proportionate to the degree in which pressure is a factor. Other paroxysmal symptms, such as vomiting, dizziness, spasms, are, as a whole, favourably influenced by this method of treatment, and no unfavourable symptoms occur; on the contrary they appear to act favourably rather than otherwise on the other phases and manifestations of brain tumour, if at all.

Hereditary Factors in Epilepsy.

Doran (*American Journal of Insanity*, July, 1903) has investigated the hereditary influences affecting 1300 patients admitted to the Craig Colony for Epileptics at Sonyea, New York. While no doubt exists as to the influence of heredity in epilepsy, there has been much discussion as to what constitutes heredity. Believing that alcoholism in the direct ancestors is a frequent cause of epilepsy, the author has included it in the group of three factors which, in his opinion, are responsible for the greatest number of hereditary cases. Alcoholism, epilepsy, and insanity, in the order named, have been responsible for a very large number of the cases. Of the 1300 cases under consideration, 800 were males and 500 females. Heredity of all kinds was positively denied in 396; 502 cases had a history either of alcoholism in the direct ancestors, or of epilepsy or insanity in the family. A history of neuropathic hereditary disease of some kind existed in 605 cases; 198 cases showed a history only of non-neuropathic diseases, the chief of which were tuberculosis, rheumatism, and cancer. There was a direct transmission of epilepsy in 7·8 per cent., and the occurrence of the disease in the collateral history is seen in 11·5 per cent. of the cases. Epilepsy occurred more than once in the direct antecedents of seven cases. Insanity appears in 7·9 per cent.; in 3·2 per cent. there was a history of insanity in the direct ancestors, and 4·7 per cent. showed the disease in the collateral branches. Alcoholism occurred in 21·6 per cent. This condition appears more than once in the direct ancestors in 21 cases; 20·2 per cent. have a history of direct hereditary alcoholism; 19·7 per cent. show alcoholism in the parents, and exactly 18 per cent. a history of alcoholism in the father. Considering the three foregoing diseases together, it is seen that they only occur singly or in combination in 38·6 per cent. The combinations between these three diseases in the histories are as follows:—All three of them existed in six cases; epilepsy and alcohol were found together in 59; alcohol and insanity in 17; and epilepsy and insanity in 17. As to the side of the family from which epilepsy is more frequently inherited, it may be said that considering epilepsy and insanity only as hereditary factors, out of 193 cases in which the data were sufficient for this investigation, 88 cases showed inheritance from the mother's side, and 84 from the father's side; 11 showed hereditary influence on both sides. The average age at onset of epilepsy in cases with a neuropathic heredity was 11·2 years; cases with alcoholic ancestry developed the epilepsy at the age of 10 8 years; cases in which no neuropathic heredity was ascertained developed epilepsy at 13·36 years. Where there was a combination of alcoholism and epilepsy in the heredity the age onset of the epilepsy fell to 9·9 years. The lowest average as onset was found in cases which had a combination of alcoholism, epilepsy, and insanity in the history.

Chorea and Graves' Disease.

Sutherland (*Brain*, Summer, 1903) states that the nature of the association between these two diseases is still under discussion. Dieulafoy says that choreiform movements may form a part of the motor troubles in Graves' disease, but that there is no true chorea associated with Graves' disease. He considers that if the two diseases were associated maladies, and were dependent on a common cause, we should not find the sequence always the same, namely, that Graves' disease always precedes chorea, and is never a sequel to it. The author records two cases which directly contradict this latter assertion. The first was a married woman of 26 years, who at the age of 16 had an attack of rheumatic fever, which was followed six months later by an attack of chorea, lasting 13 months. Then there gradually ensued a tendency to tremors, palpitation, and enlarged thyroid. When seen first by the author she presented all the cardinal symptoms of Graves' disease. The second case was a girl of 15 years who had seven attacks of chorea. The last one had come on 12 months previously, and simultaneously with this an enlargement of the thyroid gland appeared. Other symptoms gradually developed, and ultimately all the typical symptoms of Graves' disease appeared. It is interesting to note that Sir W. Gowers, in writing of the treatment of chorea and of Graves' disease, uses almost the same words, the important element in the treatment being "to secure tranquillity of mind and rest of body."

OPTHALMOLOGY.

Paraffin Prothesis.

E. Hertel, Jena *(Von Græfe's Archives für Ophthalmologie.)* The good results obtainable by the injection of paraffin into the soft tissues for various purposes, *e.g.*, to improve the form of a depressed nose, naturally suggested its use to form a stump on which to implant an artificial eye, and this operation has found a place in ophthalmic surgery. Hertel has been making experiments on rabbits to determine the best method of using the paraffin. He injected sterilised paraffin, melting at 40 C., into the healed socket after enucleation, and found that it did not produce a useful stump. Moreover, two rabbits died of embolism immediately after the operation. He next used solid paraffin balls, with melting point of 78 C., inserting them in some cases into the previously emptied scleral cavity, and in others into Tenon's capsule. The results were generally satisfactory, except in the case where panophthalmitis was present at the time of operation, when the ball, inserted into Tenon's capsule, was extruded after a few days. In a third series of cases he injected paraffin at a high melting point (60 C.) into the sockets after enucleation, but the results were not nearly so satisfactory as with the solid paraffin balls. [Maitland Ramsay, of Glasgow, has had great success in a large number of cases by injecting sterilised paraffin, melting at 104 Fahr., into Tenon's capsules.]

A New Method of Preventing Infection from the Conjunctiva after Operations involving Opening the Anterior Chamber.

Ellett (*Oph. Record*, April, 1903) says the risks of infection of a wound of the globe and disastrous consequences in diseased conditions of the conjunctiva and lachrymal passages are well known. He describes a plan he adopted to obviate this risk in a case of cataract extraction, where there existed a muco-purulent conjunctivitis which had baffled all treatment at the hands of himself and several other surgeons for some months. After full explanation, the patient decided to accept the risk. The conjunctiva was first dissected all round the cornea, as in the first stage of the operation, for enucleation, and freed from the globe all round by means of a probe, the separation upwards and downwards being carried to the extent of about half an inch. The cataract was then extracted by means of the combined operation (with iridectomy). The cut edges of the conjunctiva were then drawn together and united on the cornea by a horizontal row of stitches, care being taken to get complete apposition. Iodoform was dusted in and the eye covered by a light gauze dressing which rested on the cheek and brow and did not touch the eye. The eye was irrigated with boracic lotion and re-dusted with iodoform every hour. Stitches were removed on fourth day. The edges of the conjunctiva gradually separated and finally attached themselves in their normal position. The final result was excellent, V being 20/30 with + 11 D. (One would have been inclined to fear adhesion of the under surface of the upper conjunctival flap to the line of incision made for the extraction, which would have interfered with the subsequent retraction of the flap and necessitated another operation to free it.—*Periscopist.*)

Vernal Conjunctivitis treated by X-rays.

Frank Allport, of Chicago (*Ophthalmic Record*, October, 1903), reports a case of this most obstinate complaint on the palpebral conjunctiva treated successfully by X-rays, the flattened warty masses having been first excised. About 80 exposures were given with little if any improvement at first. The patient had been subjected to all the recognised methods of treatment by different surgeons, both in Europe and America, during seven years, without any benefit.

A New Local Anæsthetic—Yohimbin.

C. Maquani (*Turini Annali di Ophtamologia* vi., 1903) claims to have "discovered" the local anæsthetic effects of this drug, though in other departments of therapeutics it has been known for some years. His experiments and experience have led him to consider it to have advantages possessed by no other anæsthetic. No intoxicating effects have been observed even when it has been subcutaneously injected. The anæsthesia is complete in 10 minutes after instillation into the conjunctival sac, and persists for half an hour, allowing of the performance of lengthy operations. In both these respects it has an advantage over cocain, as well as in not producing desiccation of the cornea. It does not affect the accommodation, and though movements of the iris are rendered sluggish, they are not abolished altogether. It has the disadvantage of producing hyperæmia of the conjunctiva, sometimes very pronounced, but this can be controlled by adrenalin. He uses a 1 per cent. solution with a drop or two of chloroform added if he wishes to preserve it for any length of time. With solutions more than a week old the anæsthesia does not last so long as with fresh solutions.

Some Practical Points in the Treatment of Sympathetic Ophthalmia.

Edgar Brown and Edgar Stephenson (*Oph. Review*, October, 1903), assuming that there must be either an undiscovered microbe or an irritant poison present in the sympathising eye to explain the unsatisfactory results of operations for the after effects of sympathetic uveitis (on the theory that this irritant is the cause of the almost invisible consecutive inflammation), irrigated the anterior chamber (after iridectomy) with normal saline solution, introduced by a fine pointed flat nozzle. The results were far better than are generally attained by other methods. The patient had previously been operated on without benefit by repeated needlings and iridectomy.

Fatal Hæmorrhage from the Conjunctiva.

Wiener (*American Journal of Ophthalmology*) reports the case of an infant on whom this occurred, born of a mother suffering at the time from chancroids and gonorrhœa. No history of hæmophilia could be elicited. Immediately after delivery, two drops of 2 per cent. solution of silver nitrate were instilled into the baby's eyes. Next morning the eyelids, face, and pillow were covered with blood. The same afternoon there was a recurrence, and the palpebral conjunctivæ were found to be covered with a white membrane. Adrenalin solution, iced water compresses, bandaging, alum stick, adrenalin powder, and gelatine solution were tried, but all without more than temporary avail. The child gradually sank, and died from anæmia in a week. Post-mortem examination showed no disease whatsoever of internal organs, and there were no internal hæmorrhages.

CORRESPONDENCE.

London.

(FROM OUR OWN CORRESPONDENT.)

Reopening of the London Medical Schools—Cancer Research—Gout—The Protective Influence of Anti-Typhoid Inoculation, etc.

In accordance with usual custom, most of the metropolitan medical schools entered upon the work of another winter session on October 1st. At many of them the time-honoured custom of an introductory address was dispensed with, but at some the old plan was adhered to and the students were treated to a becoming homily. At Middlesex Hospital, Mr. William Hern eulogised medicine as a calling, and, having reiterated all the threadbare platitudes about its nobility and general superexcellence with which we are all familiar, he glided on to a much needed appeal for greater attention to oral hygiene. In view of the fact, which is daily becoming more widely recognised, that many disorders owe their origin, and even their whole existence, to carious teeth and uncleanly mouths, and in view of the further fact, which is one of common knowledge, that among the poor, mouth and teeth are left to look after their own hygienic requirements, most physicians will agree with Mr. Hern that " the State should be able to organise some system of gratuitous dental supervision and treatment to supplement the necessarily limited work of the few existing dental hospitals." At St. Mary's, Dr. Warren Low dealt with the relationship of Military Medical Service to the Civilian Profession. Dr. Low acted as a civil surgeon during the South African campaign and was therefore able, from personal experience, to commend what is good and condemn what is bad in our present system. He pointed out that the bitter experience of the war had indicated the immediate need for reform in many directions, and that already several improvements had been effected. But though bearing willing testimony to the gain which will accrue to the medical services of the Army by the alterations already carried out, Dr. Low claimed that they do not go far enough and offered some practical suggestions for a more elaborate scheme which would provide, in the time of emergency, for the immediate increase of the regular staff by drafts from the Civilian Profession. He recommended the establishment of a reserve of civilian physicians and surgeons, who should have training, be attached to specific units, and be liable to be called upon in case of national requirement. According to grade they should receive a retaining fee, be properly trained in the duties they had to perform, and receive rank as officers of the regular Army Corps, according to their degree. He would have his scheme include three classes—one of young men, another of house surgeons, and the third of consulting physicians and surgeons, who should be attached in suitable numbers to each Army Corps, in ranks according to their professional status. It is admitted that a closer association of the Army Medical Service with civil pactitioners is desirable, and Dr. Low's suggestions are eminently worthy the consideration of those in authority. At St. George's, Dr. Dakin naturally chose Gynæcology and Midwifery as the subject of his discourse. He thought there was room in this country for considerable improvement in the practice of midwifery and suggested the following three ways for betterment :—The protection of the poorer classes from the harm done by ignorant and dirty midwives ; the more complete application of aseptic midwifery by medical men in practice ; and an improved method of teaching the subject to students. At King's College, Sir J. A. Cockburn devoted himself to a disquisition on the evolution of the Empire, and ventured on the prophecy that " eventually there would be a Pan-Britannic Federal Constitution, with an Imperial Parliament consisting of a Senate representing the component nations, and an Assembly with representatives in proportion to the population of each, together with untrammelled trade throughout the whole." The most interesting and brilliant address of all was delivered at Charing Cross by Sir Charles Wyndham. He referred to his early connection with medicine, but regretted that though his diplomas were in order and he might be legally supposed to be neither unlessoned nor unpractised, the theatres in which he nowadays conducted his operations were not of a surgical character. None the less the memory of his early career formed a bond between himself and medical students, which the rapid and ruthless passage of years could never efface. He counselled his hearers to be loyal first to the profession they had chosen, next to their patients, and finally to themselves. He waxed eloquent over the superlative need in these days for moral courage on the part of the doctor. " In this age," said Sir Charles wisely, " when the smaller vices were multiplying, each with the attendant Nemesis of disease, let them have the courage to call things by their proper names. If a patient courted death or misery by drink, drugs, or vicious life, let him be told so in plainest terms. Let them not disguise the truth by some euphemistic Greek phrases ending in '*itis*'—phrases which fell weakly on cowards' ears and issued lightly from another coward's lips. To gloss over the vice which caused—nay, was—the disease, and thereby encourage its countenance was high treason to the profession." An eloquent and vigorous oration was concluded by a reminder that though every one of his audience could not expect to establish an epoch-making discovery, or to write a great book, or perhaps even to become a fashionable physician living in Harley-street, it was still open to them all to descend into the arena of struggle against disease and contribute their quota to the ceaseless conflict. For though the healing art had of late fathomed many mysteries, a vast, bitter unplumbed ocean of disease still ceaselessly throbbed and tossed on the rocky bed of pain, and moaned around them with its many voices.

The first annual meeting of the general committee of the Cancer Research Fund afforded gratifying evidence of progress in the work which the Fund has been created to carry out. In the unavoidable absence of H.R.H. the Prince of Wales, the chair was taken by the Prime Minister, who delivered an admirable address, in the course of which, with his usual felicity of expression and grasp of detail, Mr. Balfour adverted to the difficulties which beset the endeavours now being seriously undertaken to elucidate the true nature of cancer, and uttered a timely warning that, in the nature of the research, it was hopeless to look for immediate results. The report of the first year's work was submitted by the Executive Committee, and its adoption was moved by Lord Strathcona, who pointed out tha though millions were interested in the results of this investigation, the list of subscribers included only 213 names. Between £40,000 and £50,000 was still required to enable the work to be thoroughly prosecuted, and he trusted a further appeal to the public would be speedily successful in raising this amount. The report itself is a complete review of the year's operations, and is drawn up under separate headings by the secretary, Mr. Frederick Hallett; the general superintendent, Dr. Bashford; and the treasurer, Mr. Henry Morris. The secretary gives a full account of the origin of the Fund and of the steps taken for its foundation; the general superintendent shows the lines upon which the investigation is being carried on and gives some statistical tables gathered from various sources; the treasurer refers in detail to the finances and to the anticipated amount which will be required to fulfil the whole scope of the enquiry. The term "cancer," for the purpose of the research, is to be held to include all malignant new growths, whether occurring in man or the lower animals, and numbers of the veterinary profession and of the Board of Agriculture are included among the workers. During the year 400 cases were collected in which electrical treatment of one form or another had been applied. In rodent ulcer, the X-rays were admitted to have been useful, but no results had been brought forward which established the efficiency as a curative agent of any form of electrical treatment in cases of either sarcoma or cancer. Among animals, 31 cases of malignant disease had been indentified during the year, and a long series of doubtful specimens had been examined. The true cause of malignant disease may ultimately prove to be simple and to lie close to our hands, but the present absence of any certain clue in one direction or another seems likely to make the process of investigation both tedious and costly.

In a recent issue of the *Practitioner* the space is entirely devoted to a consideration of this important disease, which is dealt with in a series of essays by men who have given special attention to its investigation. It is an excellent plan to thus focus within the compass of one issue of a journal all the most up-to-date information of an important and prevalent disease, and the editor is to be congratulated on the success with which, in this instance, he has marshalled his material so as to produce a complete picture of gout as viewed from the standpoint of its history, incidence, symptomatology, pathology, and treatment. An introduction to the symposium from the pen of Professor Clifford Allbutt reviews the communications of the various contributors and criticises the various disputatious points which the discussion inevitably produces. It will come to many as a surprise to hear from the distinguished Professor that, in his experience, he has not found arterial pressure to rule higher in gouty persons than in others who have reached middle or later life; but most observers will agree with his plea for greater precision of definition. "If gout," he says, "is uratic arthritis, at any rate we know where we are; when we quit this rock and, trusting to sundry pilots, try to plant the flag on a motley archipelago of dwindling kidneys, torpid livers, plethoras, flatulent dyspepsias, megrims and melancholies, we are sailing on uncharted seas. A patient in gout surely ought to be more or less gouty; and if we perceive other disorders consistently hovering about his gout, premonitory, contemporary, or consequential, as the case may be, we may know then by their associates, and include them cautiously in the same predicament; but to say of many and many a patient that he is gouty when he never had a uratic arthritis in his life, much as he may have prayed for it, seems a topsy-turvy nosology. It may be urged that he has disorders identical with those which hover around the arthritic man; but the identity is surely an identity of negatives rather than positives, of common disorders rather than of specific characters or consistent groups of characters." The general impression that gout is a rare disease in America is somewhat widely shaken by the article contributed by Dr. Thos. B. Futcher, of the Johns Hopkins University, who supplies statistics which show that it is much more prevalent than is generally supposed; and that in Baltimore, where it is more abundantly met with than in any other large American city, the cases are only slightly under one-third less frequent than in London. The apparent infrequency of gout he attributes to failure on the part of the profession to recognise the disease which is constantly mistaken for rheumatism. Similarly, the belief that gout is almost unknown among the inhabitants of warm climates is not accepted by Dr. Alexander Crombie, who, while admitting that it is less frequent in the tropics than in Europe, relates his experience of many cases of classical though mild gout among Europeans, Jews, and well to-do natives in Calcutta. He ascribes its comparative infrequency to the lower tissue-metabolism which is required to raise the temperature of the body in hot climates; and among natives who adhere to the rules of their religion, to the less nitrogenous nature of their diet. Dr. Toogood, the medical superintendent of the Lewisham Infirmary, discusses gout as it occurs among the poor. He doubts whether those who are really poor ever develop gout; but, he says, "poverty being a relative term, it would be better for the gout stricken subject if he were just the amount poorer necessary to prevent his acquisition of malt liquor." He looks upon the consumption of malt liquor as the chief, if not the only, cause of the production of gout among those who become inmates of Poor Law Infirmaries, and declares that he has never met with the disease in a non-beer drinker, however large an appetite he might have, or however much he might be addicted to the consumption of spirits. The relation of gout to granular kidney and to lead poisoning is dealt with by Dr. Samuel West, who comes to the conclusion that though gout and lead are both capable of producing chronic changes in the kidney, neither the one nor the other causes granular kidney. The sequence of events is all the other way about in Dr. West's opinion. He believes that "the presence of granular kidney greatly increases the liability of the patient to gout on the one hand, and lead-poisoning on the other, or to both together, and in each affection alike greatly increases the gravity and risk." Dr. Haig sturdily upholds his well-known views, and thus announces in the opening sentences of his article his uncompromising attitude:—"Gout is not a constitutional disease due to any defect in the formation or functioning of the body. It is a form of 'diet' disease due to food poisoning. It follows from this that it can be cured by leaving off the poisonous foods, and prevented by omitting such foods from the diet of the young." This is a plain enough statement about which there can be no misunderstanding, but everybody will not agree with Dr. Haig that gout is wholly due to tea and animal flesh, nor will more than a mere fraction of gouty humanity be ever found Spartan enough to follow his régime. The assertion that "a careful measurement of the rate of the capillary circulation is an absolute guide to the amount of uric acid in the blood," is one about which there may well be some scepticism. His enthusiasm carries him so far that he prophetically foretells the advent of a gout free race, so soon as his views are generally accepted and the diet of the young is freed from all substances which contain uric acid. "Such a dietetic system," he says, "conduces through its effects on the circulation to a glorious development both of mind and body, to which in the past we have been strangers. And when the change has been made and become general, future generations will look back on our present records of sorrow, suffering, and degradation with amazement.'" To most doctors and patients less extreme views will commend themselves, and these are ably advocated by Dr. Walker Hall, of Manchester, in his paper dealing with metabolism. He insists that the gouty patient must be thoroughly nourished by ingestion of a sufficient quantity of easily assimilated food, suited to his natural tastes and inclinations, and that it is entirely unnecessary to restrict him to vegetable proteids. "The line of safety lies in a precise knowledge of the varieties and quantities of meat-foods that each patient effectively metabolises." This view is corroborated by Sir Dyce Duckworth, who, in dealing with the question of dietary for goutily-disposed persons, says: "Men and women are not so many ninepins or human units invaded by morbid agencies. No two individuals, indeed, are precisely alike in respect of their constitution or metabolic processes. In this sense, then, there is no treatment for gout, and no special diet for the gouty as such, but there is a treatment and a management for the particular patient who manifests symptoms of gout." Animal food he declares to be not only harmless, but beneficial to gouty persons, provided it be taken in moderation. He recognises no difference between red and white meats, fowl, and any variety of game in respect of gout-provoking quantities; and he is completely at a loss to understand why potatoes should be forbidden to the gouty. What he thinks should specially be forbidden is rich, seasoned and twice-cooked food; strong soups, tomatoes, rhubarb, food cooked with fat or sugar, large and mixed meals of animal and farinaceous substances; also fruit and wine. Suggestive papers on treatment are contributed by Dr. Luff and Dr. Bannatyne, of Bath, and the number is completed by a comment upon and review of some recent literature on the subject of arthritis from the pen of Dr. Poynton The editor thus sums up what seems to be the true gist of our present knowledge as to the real nature of the disease:—"In all probability gout consists in a defect of metabolism whereby products derived from cell-nuclei are not properly used up or excreted. These products may arise either from nuclear matter contained in the food or from the natural wear and tear of tissue-nuclei; they are retained in the system, and a deposit of one of them —sodium biurate—in the joints sets up irritation there, and causes an acute attack of arthritis." To those who are interested in the subject of gout, this issue of the *Practitioner* may be recommended as a comprehensive epitome of most that is known about the disorder at the present moment.

Dr. A. E. Wright has recently published in the *Lancet* two interesting statistical records which have been furnished to the War Office. The first table refers to the incidence of, and mortality from, enteric fever in the Indian Army during 1901. It shows that among 55,955 uninoculated soldiers there occurred 744 cases of enteric fever, of which 199 died; whereas among 4883 inoculated soldiers there were only 32 cases of the disease, with three deaths. According to these figures, the incidence rate was less by a half and the death rate by five-sixths in the inoculated than in the uninoculated. The second table refers to Lord Methuen's column during a limited period of the South African War, viz., from December, 1899, to March, 1900, and deals only with the incidence of the disease. From this table it is shown that of 10,981 uninoculated soldiers, 25 per cent contracted enteric fever, whereas of 2535 inoculated soldiers, there were only 26 victims. Here again the diminution of the incidence rate is remarkable, being more than a half during the period under observation. Such figures as are here brought out are sufficiently striking to arrest attention, and certainly warrant a continuance of experimental inoculations on a large scale. They go a long way to justify Dr. Wright's unwavering confidence in the anti-typhoid serum which is so closely associated with his name.

Victoria.

(FROM OUR OWN CORRESPONDENT.)

A New Medical Institute at Brunswick—Proposed Removal of the Kew and Yarra Bend Asylums—The Prevention of Tuberculosis.

THE quarterly report of the Victorian Medical Defence Association of Victoria is to hand, and it gives the dismal news that a medical institute has been started at Brunswick. Two medical men, viz., Dr. Ratten (late of Beechworth Lunatic Asylum) and Dr. Boughton (late of Richmond), have accepted a salary of £500 per annum, with £1 1s for confinements thrown in as an extra. They have to attend all members and their families, as per agreement, and have to provide rooms at their own private residences, furnished to the satisfaction of the management committee, for waiting and consultation. Several of the lodges of the district have not joined the institute so far, and it is to be hoped that they will not do so. The duties that the medical officer has to perform ought certainly to qualify him for heaven if he can do them. He has to perform all operations, major and minor, to consult with anyone that the patient likes, but particularly with the other medical officer of the institute, and help him to perform any operation that may be deemed necessary. He must attend any urgent case when assured by a member of the institute that he cannot obtain the services of his own doctor. He has four hours a day consulting in his surgery, and the rest of the time he is doing his visits; and God help him, as there is no limit as to the number who may go on his list! He has also to provide all surgical instruments and other requirements, such as splints, bandages, anæsthetics, and the like, that may be necessary for the performance of his duties, except a few things such as trusses, catheters, enema syringes, and such other appliances as cannot be again used with safety. I have given a *resumé* of this agreement, as I thought it might interest some of your New South Wales readers, and will show them the depths to which a suburban practice in Victoria is coming. There is no wage limit here, and all sorts of inducements are held out to men in good positions to join lodges which they make use of, especially for political purposes. Again, the medical men of Brunswick have found it necessary to ask the Collins-street specialists not to attend patients on their lodge specialist lists who belonged to the institute. Now, this is an anomalous condition, viz., that a specialist in Collins-street should have lodge patients at all, and report hath it that "SOME" of these so-called specialists have magnanimously agreed not to attend to any institute lodge member. The hope has also been expressed that the consultants will refrain from meeting the medical officers of the institute, and if they do, as many of them have done in the past with regard to the 6d per week practitioner, we may say, alas! poor general practitioner, thy day has come! Hie thee away and become a good all round specialist, or take up some other business where there may be some pleasure in living!

The removal of the Kew and Yarra Bend Asylums and the building of more modern establishments was the subject of a long discussion between members of a deputation representing certain suburban municipalities and the Premier. The idea was to sell the land as residential sites and apply the proceeds to the building of new institutions. There are between 700 and 800 acres comprised in these reserves, and it is to be hoped that the Government will not allow them to pass out of the hands of the public, as there are already too few breathing spaces about Melbourne The scheme advocated by the deputation provided for the permanent reservation of over five miles of the river (Yarra) frontage and a considerable area of parks and gardens, and this land ought as well to be reserved to the public. As for removing the present asylums, by all means let it be done, if a more suitable place can be found, but let some financial scheme be found other than parting with our public reserves.

Complaints are constantly being made by metropolitan municipalities regarding the alleged severity of the Public Board of Health's regulations in respect to tuberculosis. Dr. Gresswell (chairman of the Public Board of Health), at a meeting of the board, gave the latest views on tuberculosis, stating that it was dangerously infective, and it was necessary to try and prevent the spread of the disease. He considered it would be an outrage on the community for a person who knew he was suffering from tuberculosis to go into a factory, a theatre, or any public place and expectorate unchecked. Metropolitan councils did not appear to know that from 60 to 90 persons died every month, year after year, from tuberculosis. Councils should see to the isolation of patients and the disinfection of their homes, and the Government or the municipality, or both jointly, should be charged with the cost of any action taken in such cases. He stated there was no desire to harass anyone; all that was aimed at was the protection of public health by minimising the risk of infection as far as could be done by regulation.

Queensland.

(FROM OUR OWN CORRESPONDENT.)

Appointments at the Brisbane Hospital — Isolation Hospital—The Lady Bowen Hospital.

THE decision of the Brisbane Hospital Committee to invite applications for the positions of assistant gynæcologist, assistant surgeons (3), assistant physicians (3), and anæsthetist, does not appear to have been formed too soon. One wonders, however, if there will be a sufficient number of applicants to fill the positions. The conditions of practice in Brisbane are so different from those in larger cities that it is difficult to estimate the net value of honorary appointments. The inducements are not as great as might appear. Certain members of the present honorary staff are very much against the granting of any beds to the assistant honorary staff. The work of an honorary gynæcologist might consist largely in admitting patients and prescribing douches for those not admissible. Time taken up with work at the Brisbane Hospital may be a source of great pleasure and future benefit, but the circumstances of general practice must be considerably modified before it will pay, mentally or financially, any but a young man of mediocre parts to accept a position as honorary assistant at the Brisbane Hospital. In any case, one hopes the selection will be left in the hands of the medical board, and not with the lay committee, whose intimate knowledge of the conditions necessary for suitability for such offices cannot be so expert as that of medical men already holding office at the hospital. Some modification in the constitution of the medical board is also called for; at the present time this consists of the honorary staff, together with the paid residents. It would seem to be a mistake that the young paid assistants should have the power to rule an election or decision. No doubt these matters will be rectified 'with the process of the suns."

At a meeting of the Intercolonial Medical Congress, held in Brisbane in September, 1899, it was resolved as a result of a communication from the section of Public Health—"That isolation hospitals should be opened as separate establishments, apart from and not adjacent to general hospitals, because of the extreme danger of infectious diseases being communicated to the patients in the wards." During a recent epidemic of scarlatina, an infectious diseases hospital was established in Brisbane, with the pretty name of "Wattlebrae" (so called because of a stone quarry behind it and a swamp in front!). This was run by a committee formed from the divisional boards of the district, and maintained by them, and was served by a medical man appointed by them—a general practitioner. Now it has been decided to go back to less hygienic principles. The committee of the Brisbane Hospital, all laymen, have made an offer to take over "Wattlebrae," which is just over the way, for £300 a year. By the adoption of this plan the work of attendance upon infectious patients will devolve upon the young residents of the Brisbane Hospital—a condition of affairs which is not without its dangers.

The committee of the Lady Bowen (Maternity) Hospital are at loggerheads among themselves, with the honorary staff, and with their (lady) resident medical officer; and now, in the hope of settling matters in the way hoped for by one or two of them, they have called in the services of the trustees upon a question concerning which the trustees appear to have no jurisdiction. The question at issue is the amount and manner of leave of absence of the resident. The question was raised by the resident, and referred by the committee to the honorary staff, who advised that the resident might be allowed to leave the hospital in charge of the matron or the head nurse, both of whom are experienced women and capable of dealing with temporary emergencies, every afternoon, provided that she was "on the telephone," and within a few minutes of the hospital; and that she should be allowed two afternoons a week from 2 p.m. to 11 p.m., for unlimited absence, provided that she had previously obtained permission from and made *locum tenens* arrangements with the honorary physician of the month. At a well-attended meeting of committee the recommendations of the honorary staff were adopted. At the next meeting of committee, at which only seven were present, it was resolved by a majority to rescind the resolution which adopted the honorary staff's recommendation, and to ask the advice of the trustees. And so the matter rests for the moment. The intelligence of the trustees will probably lead them to let the matter alone or to advise that the opinion of honorary staff be taken upon a matter with which they might be expected to be conversant. If, however, the trustees se fit to side with the minority of the committee, and advise that the decision of the honorary staff be quashed—and such things are possible in Brisbane—it appears likely that there may be resignations of sorts in connection with the Lady Bowen.

LATER —The trustees have decided to advise that the present rules be adhered to during the term of office of the present resident.

A CORRECTION.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—I wish to correct an inaccuracy in the report of the Western Suburbs Medical Association given in your November issue, and to state that the characteristic cells of the corpus luteum dasyurus do *not* originate from the theca folleculi. but from the membrana granulosa—exactly the opposite to what is given in the report.—I am, etc.,

Sydney. F. P. SANDES, M.D.

HOSPITAL INTELLIGENCE.

St. Vincent's Hospital, Sydney.—The following is a summary of patients treated at St. Vincent's Hospital during the year ending December 31, 1903:—Remaining in hospital on December 31, 1902, 122; admitted during the year 1903, 1752; total under treatment, 1874. Of these the following were discharged:—Cured, 1298; relieved, 338; unrelieved, 22; died, 97; remaining in hospital on December 31, 1903, 119; total, 1874. The rate of mortality over all cases under treatment was 5·17 per cent. One thousand two hundred and twenty operations were performed during this year, not including numerous minor operations at the outdoor department. Of the deaths above mentioned, 15 died within 24 hours of admission; 4 were dead on admission. Casualty cases continue so numerous that arrangement had to be made during the year, after their first attendance, for all subsequent attention at the outdoor department, no less a number than 4200 attendances being recorded under this head. The total attendances, including casualties, in the outdoor department was 30,806.

Royal Prince Alfred Hospital, Sydney.—At the monthly meeting of the Board of Directors of the Royal Prince Alfred Hospital, held last month, the hon. treasurer (Hon. H. E. Kater) having intimated that he would be unable to carry out the executive functions of the chairman during the absence of the latter in England as had been agreed upon, Sir James Fairfax was unanimously elected interim chairman of the hospital with the full executive authority of the chairman. Dr. Mackellar resigned his position as a member of the house committee owing to the stress of outside duties, and the resignation having been accepted with regret Sir James Graham was elected to the vacancy. This being the last meeting of the board prior to the expected severance of the matron (Miss McGahey) from the hospital the following resolution was unanimously agreed to:—"That this board, at its last meeting prior to the retirement of Miss McGahey from the position of matron, after a term of service of over 12 years, desires to record its full appreciation of her services, and to testify to her excellent qualities as a matron. She has been most assiduous in the carrying out of her onerous duties, into which she has thrown herself with a zeal that may even have affected her health, while by her exemplary demeanour and high standard of training she has established for the nurses, she has raised the status of the hospital and its nursing staff throughout Australasia. She carries with her the personal esteem of the members of the board and its wishes for her future success and happiness."

Queen Victoria Home for Consumptives, N.S.W.—At the last monthly meeting of the house committee of the Queen Victoria Sanatorium, Wentworth Falls, and the Home for Consumptives at Thirlmere, the medical superintendent's report (Wentworth Falls) showed that during the past month four patients had been discharged. Of those, two patients had the disease completely arrested. One patient died of meningitis, and one was sent home as being too advanced for treatment. The matron's report (Thirlmere) showed that there were 39 patients in the Home. During the month 13 had been admitted, 10 had been discharged, and two patients had died.

Adelaide Hospital Samaritan Fund.—The 20th annual report of the committee of this fund states that the number of orders issued during the year amounted to 435, and the number of patients assisted to 292, the amount expended being £195 0s 3d. These orders represent payment of rent, board and lodging, provisions, firewood, surgical appliances, maintenance at the Convalescent Home, etc. The amount expended in surgical appliances as recommended by the resident medical officer at the hospital was £38 14s, a sum the committee feel was well spent, as the patients would have found it quite impossible to procure the appliances ordered by the physicians and surgeons were it not for the help given them by the fund. They also feel that, in sending patients to the Convalescent Home, they are conferring a great boon on them, as the rest and change prove in most cases very beneficial. The committee expressed their thanks to the committee of Da Costa Samaritan Fund, who have contributed the sum of £100 during the year, thereby averting the necessity of a special appeal to the public.

Jubilee Sanatorium, Dalby, Queensland.—From the report of the Inspector-General (Dr. F. E. Hare) for the year ending 31st December, 1902, we learn that the number of patients remaining from previous year was 24; admitted during the year, 82. The number discharged was 79, and three died; remaining at end of year, 24. The 79 cases which were discharged comprised 18 cured, 44 improved, and six cases which were not consumptive. The 18 cured cases comprised 13 in the incipient stage, four pronounced incipient, and one in the softening stage. The average residence of the above was 161 days, and the average increase in weight was 1 st. 4 lb. The 44 improved cases had an average residence of 151 days, and the average increase in weight was 1 st. Eleven cases were discharged *in statu quo;* these had an average residence of 106 days. The three fatal cases comprised two of pneumo-thorax and one of hemorrhage. The report for the six months ending 30th June, 1903, states the number of patients remaining from previous year, 24; admitted during half-year, 44. The number discharged, 42; number died, 2; remaining on 1st July, 1903, 24. Of the 44 cases, seven were found to be suffering from diseases other than consumption. The 37 consumptive cases comprised—incipient 7, pronounced incipient 5, softening 7, cavitation 18. In the cured cases, with the arrest of the disease, there was an average weight increase of 18 lb. In the improved cases, with the amelioration of the symptoms, there was an average weight increase of 12 lb. Every endeavour is made to keep in touch with the cured cases after their dismissal. Of 38 cases discharged as cured before the 31st December, 1902, 34 were continuing to do well and were earning their own living in January last. There had been only four relapses. Extensive experiments were made with dust obtained from the dining-room, but in all cases the results were negative as regards the presence of tubercle bacilli. The expenditure for the year ending 30th June, 1903, were:—Salaries, £672 13s; maintenance, £1076 7s 5d; total, £1749 0s 5d. The terms of residence of patients have recently been limited to a period of three months. It was considered that, by imposing this limit, a large number of patients would be instructed in the mode of life essential for cure, and that in this way a greater aggregate amount of good would accrue from the institution.

Diamantina Hospital for Chronic Diseases, Queensland.—The first report of the medical superintendent of the Diamantina Hospital for Chronic Diseases states that the institution was opened on 5th August, 1901. The object of the institution is to provide maintenance for cases of disease which, in consequence of their chronic nature, have become ineligible for admission into, or for further treatment in, any of the general hospitals of the State, but which require and may be expected to benefit by medical supervision and hospital treatment. An endeavour has been made to relieve Dunwich of all cases of consumption, since the arrangements at the Diamantina permit of this class of patient being effectually isolated from other cases. When opened the accommodation for patients comprised 32 beds, distributed in four wards. Since then the remaining four wards in the main building have been opened. In addition, two open-air wards or permanent tents, one for males and one for females, each containing four beds, for the treatment of consumption, have been erected and opened. The total available accommodation at the present time is 72 beds. The group of buildings comprising the hospital was formerly known as the Diamantina Orphanage. In the conversion of this establishment into a hospital some new buildings have been erected, viz., two tents for open-air treatment of phthisis, one morgue, one senior nurse's quarters, consisting of six rooms, etc. Gas and water have been laid on to four ward lavatories, etc. A hot water installation has recently been added, and the sewerage has been completed. The expenses during the last year have fallen from 3s 10d to 3s 3½d per diem per bed occupied. So far as it is possible at present to forecast, the only addition which will be required during the ensuing year will be two more open-air wards for male consumptives similar to those already erected. This, it is anticipated, will make it possible to relieve Dunwich Benevolent Asylum of all consumptives. The number of patients admitted during the 22 months from August, 1901, to June, 1903, inclusive, was 173. There were discharged—cured or relieved, 16; incurable or at their own request, 16. Removed to lunatic asylum, reception house, or other public institution, 21; died, 53; total, 106. Remaining in institution on 30th, June, 1903, 67.

The Infectious Diseases Hospital, Melbourne.—The executive committee of the Infectious Diseases Hospital adopted regulations for the management of the hospital, which the committee is hopeful will be ready within a few weeks for the reception and treatment of patients. The regulations will be submitted to the Government, and to the seven municipalities which have agreed conjointly to undertake the management of the institution. Towards the cost of maintenance of the hospital the Government has pledged itself to contribute one-half. The committee believes that in order to secure the efficient management of the hospital it will be necessary to effect some amendment of existing legislation, so that the cost of treatment of patients coming from municipal districts unrepresented upon the committee of management, and which are non-contributors towards the upkeep of the institution, may be made legally recoverable from the local council concerned. A sub-committee has been appointed to make preliminary arrangements for the engagement of the hospital staff and the selection of the furniture required.

Gundagai Hospital, N.S.W.—The State Treasurer laid the foundation stone of the Gundagai Hospital on January 13th. The building will cost between £3000 and £4000. The work has been undertaken after many months of controversy between the committee and the residents as to a suitable site. The building will be of brickwork on concrete foundations, with a galvanised iron roof. The main building will provide a ward for males, 40 ft. by 26 ft., and will contain eight beds; and one for females, 21 ft. by 26 ft., and will provide accommodation for four beds. There will also be a large operating room fitted with modern appliances, a dining-room, dispensary and two bathrooms. A verandah 9 ft. wide will be constructed right round the building. The nurses' quarters, located in a building detached from the hospital, will provide accommodation for the matron, nurses' sitting and bed rooms, two private wards, and bathrooms, pantry, etc. Special care has been bestowed by the architects in the matter of ventilation and sanitation. In order that a supply of water adequate for all requirements might be provided, the contract includes the construction of an underground tank capable of holding 25,000 gallons, and seven 800-gallon tanks constructed of galvanised iron.

PUBLIC HEALTH.

New South Wales.

Health of the Metropolis.—Dr. Armstrong reports: The number of deaths of residents of the metropolis registered during December, 1903, was 536. This number is in excess of that recorded last month (510), and is equivalent to an annual death rate of 12·5 per 1000 of the estimated mean population. Diarrhœal diseases (enteritis, gastro-enteritis, diarrhœa, etc.) are again very strongly in evidence, the number recorded being 139, as compared with 90 last month; but they show a satisfactory diminution from the number registered (195) during the corresponding month of last year. The cause of this diminution will probably be found to be closely associated with the meteorological conditions that obtained during the period in question. The diarrhœa rate is found to rise *pari passu* with the mean temperature of the air in the shade, to be maintained whilst the temperature is at the maximum, and also to fall with the decline of the heat. As is usually the case, most of the victims of diarrhœa were infants, 107 out of the total of 139 belonging to this age-group. Infantile deaths (192) were higher than last month (171), but lower than those recorded (232) during the corresponding month of last year. The increase from last month is entirely in the diarrhœal group of diseases, the other groups being stationary, with the exception of diseases of respiration, in which there is a satisfactory fall from the somewhat high records of the previous two months. Zymotic diseases, excluding diarrhœa, contribute 27 deaths, of which 13 were due to whooping-cough, 5 each to influenza and typhoid fever, 2 to diphtheria, and 1 each to measles and cerebro-spinal fever. No deaths were recorded from scarlet fever. Deaths from phthisis (31) are again low, about 25 per cent. below the average for December for the past five years. Respiratory diseases, including bronchitis and pneumonia (39), are below last month's record and at about the usual average for December. Cancer (28), Bright's disease (22), heart disease (42), and violence (19) also keep at about the usual average and present no peculiar features. Cases of infectious diseases notified during the month were scarlet fever, 81; diphtheria, 31; typhoid fever, 75. Scarlet fever still maintains a steady diminution since the maximum (399 cases) was recorded in May last. Diphtheria is 50 per cent. higher than last month, although it has fallen considerably since the earlier part of the year, when from 80 to 90 cases per month were reported. Typhoid fever, despite the high level attained last month, has not increased, and is 25 per cent. below the usual monthly average for December. The city of Sydney contributed 25 cases, most of which came from a small area in Ultimo. Other portions of the metropolis presented a very good record for December.

City Health Department and the Food Supply.—In the course of his address, the retiring Lord Mayor of Sydney (Alderman T. Hughes) stated that "during the past two years, while steadily reducing the general taxation, we have continued to build up our health department, which has stood the test of two outbreaks of plague, and which under the capable administration of Dr. Armstrong is doing most valuable work. With increased efficiency in street cleansing, we have enforced more rigidly the by-laws for the proper storage and removal of garbage, and its ultimate destruction by fire. The disinfecting chamber attached to the destructor assists materially in reducing the risk of infection, and the rigorous enforcement of sanitary laws relating to unwholesome dwellings and defective sewerage has produced a marked change in the condition of the city and in its power to successfully resist the spread of disease. Good work is also being done in the endeavour to prevent adulteration of our foodstuffs, and particularly our milk supply. Merely to give one example out of many, I may point to evidence recently given by Dr. Armstrong, which showed that two years ago 44 per cent. of the samples of milk taken for analysis were found to contain preservatives. Last year the percentage had dropped to 22, and this year the analyses showed only 4 per cent."

The Milk Supply of Woollahra.—The Board of Health has informed the council that 10 samples of milk forwarded by the local inspector for analysis had been chemically examined, and found to be free from adulteration by the addition of water. The local inspector informed the council that the improvement in the quality of the milk supply had been brought about by the council in obtaining samples for analysis from time to time.

Victoria.

Sanitary Telephone Receivers.—The Postmaster-General has sanctioned the introduction of a simple and inexpensive sanitary attachment for telephone receivers, which has also received the approval of the Board of Health. The risk of contagion and the unpleasantness of placing a hot and sometimes moist receiver to the ear after its use by other persons is then entirely obviated.

The Oakleigh Cemetery.—Mr. Bent, Minister of Health, accompanied by Dr. Gresswell, visited Oakleigh on January 1st for the purpose of deciding whether the local cemetery should be closed or not. After hearing the arguments advanced, Mr. Bent said he had decided to cancel the order for closing, but would debar the trustees from making any further interments on the south end of the cemetery, about two acres, and would stipulate that no graves were to be nearer than 40 feet from the fence in either direction, the agreement to hold good for the next five years. The secretary had prepared a statement showing that the cemetery comprised 10 acres, which would accommodate 8546 graves, of which only 1191 (or about an acre) had been either sold or occupied, leaving room for 7355 graves vacant.

New Pharmaceutical Preparations.

WE have received from Messrs. Burroughs, Wellcome and Co. specimens of some new preparations, including tabloids of strychnine sulphate, $\frac{1}{40}$ gr. for hypodermic use; tabloid quinine salicylate, 1 gr.; tabloid iron phosphate and hypophosphite; tabloid iron, arsenic and digitalin; tabloid sparteine sulphate; and soloid Romanowsky stain.

The value of quinine salicylate in rheumatic affections and its occasional usefulness in influenza, diarrhœa and neuralgia are well recognised. For some years a tabloid product containing 3 grs. of the salt has been issued, but as it is sometimes desirable to prescribe smaller doses, more frequently repeated, tabloid quinine salicylate, 1 gr., is now prepared.

The favourable results which have followed the use of iron hypophosphite in phthisis, as well as in nervous affections, have been widely observed, and this salt is now prescribed with increasing frequency. A tabloid product of the following formula—soluble phosphate of iron, 2 grs.; soluble hypophosphite of iron, 1 gr.—has been prepared, and this combination has been found of service in cases of nervous depression associated with anæmia, and also under certain circumstances in phthisis.

The tabloids of iron, arsenic and digitalin contain soluble sulphate of iron 3 gr., arsenious acid $\frac{1}{100}$ gr., digitalin $\frac{1}{100}$ gr. This combination has been found very useful as a chalybeate tonic and cardiac stimulant. The soluble phosphate of iron employed corresponds to the preparation recognised by the United States Pharmacopœia, and possesses the advantages of solubility and freedom from any tendency to cause constipation.

Sparteine sulphate possesses well recognised properties as a cardiac stimulant and diuretic. Its action is comparable to that of digitalis, and it sometimes succeeds when that drug fails. For some years tabloid hypodermic sparteine sulphate $\frac{1}{2}$ gr. has been issued, but to meet the requirements of medical men who wish to administer the drug by the mouth, a product containing 1 gr. is now prepared. It is made with specially fine sparteine sulphate, and presents the most effective and convenient means of administering the drug.

Romanowsky stain is the most recent addition to the useful series of microscopic stains issued under the "Soloid" brand, and it presents a convenient means of employing Leishmann's modification of Romanowsky's stain. One "Soloid" product is to be dissolved in 10 c.c. of pure methyl alcohol. A few drops of the solution should be run on to the blood film, and allowed to remain four or five minutes. Then double the volume of distilled water is to be dropped on to the film. This will bring out the red tint in the corpuscles and blue colour in the nuclei. After another two minutes staining, the film may be washed in distilled water, dried in air, and mounted in xylol balsam. "Soloid" Romanowsky stain is issued in tubes containing six.

An Ancient Medical Code.

As many readers of the GAZETTE are doubtless aware, the French savants made a very valuable discovery at Susa last year, namely, a monument containing engraved on it the laws of King Hammurabi, who ruled over Babylon and Mesopotamia as far as the Mediterranean coast.

This is the oldest code of laws in the world, dating as it does from the third millennium B.C. That it did much to mould jurisprudence through that great empire there is no doubt, influencing probably Hebrew tradition to a great extent. Even 2000 years later the code of the great king was made a text book in the schools of Babylonia.

A few months after the discovery, the French Government copied, transcribed and translated the code, which has been published and edited by distinguished scholars. It is a matter of great regret that many of the columns of the code have had the writing erased, the stone having been repolished; this is believed to have been done by some later conqueror, who had, perhaps, intended to set up some inscriptions of his own in their place. Even in what remains, however, there are some interesting references to medical matters, which I venture to quote from the code.

"If a man has struck a man in a quarrel, and has caused him a wound, that man shall swear, 'I do not strike him knowing,' and shall answer for the doctor."

"If a doctor has treated a gentleman for a severe wound with a bronze lancet, and has cured the man; or has opened an abscess of the eye for a gentleman with a bronze lancet, and has cured the eye of the gentleman, he shall take ten shekels of silver.

"For a poor man, five shekels of silver.

"If he be a gentleman's servant, the master of the servant shall give two shekels of silver to the doctor."

"If the doctor has treated a gentleman for a severe wound with a lancet of bronze, and has caused the gentleman to die; or has opened an abscess of the eye for a gentleman with the bronze lancet, and has caused the loss of the gentleman's eye, one shall cut off his hands.

"If the slave of a poor man, he shall render slave for slave, if he dies.

"If the eye is lost, he shall pay money, half the price of the slave."

"If a doctor has cured the shattered limb of a gentleman, or has cured the diseased bowel, the patient shall give five shekels of silver to the doctor.

"If the son of a poor man, three shekels of silver.

"If a gentleman's servant, the master of the servant shall give two shekels of silver to the doctor."

G. H. HOGG.

Launceston, Tasmania.

MEDICAL NOTES.

Proposed Home for Incurables in Sydney.—A meeting of the committee of the proposed Home for Incurables was held at the rooms of the British Medical Association, Bathurst-street, last month. There were present Archdeacon Langley (in the chair), Dr. P. Sydney Jones, Dr. Crago, Mrs. Hey Sharp, Mrs. Wilfrid Docker, Mrs Gifford Moore and Miss Ryrie. It was resolved that an appeal for subscriptions should be made by circular, setting forth the object of the movement, and the necessity for the establishment of such an institution in Sydney.

Dental Board Election.—The first election of officers to the Dental Board of New South Wales under the Dentists Act resulted as follows: — Medical members: Sir James Graham and Dr. Palmer. Dental members: Dr. Henry Peach, Mr. C. C. Marshall, Mr. Charles Hall and Mr. C. G. Hodgson.

Charitable Donation and Bequest. — Miss Ada Crossley has given to the Hospital for Sick Children, Sydney, the sum of £210 for the endowment of a cot.

A Novel Lawsuit.—A lawsuit of absorbing human interest is due to come before the highest legal tribunal in Holland shortly. The town of Amsterdam has attached to its municipal hospital an incubator for the rearing of infants. Some time ago a citizen sent a male child of his to be placed in the incubator, but on attending at the hospital to receive it back he was tendered a female child. The attention of the authorities was called to the matter, but they declared that it was a female child that they had received in the first instance, and despite searching inquiries no trace of the missing male infant could be discovered. Upon this the father sued the authorities for the return of his child, and after a protracted hearing won his action, the court declaring that the child tendered to him was the wrong one. Now he is suing for damages for the loss he has sustained by reason of the authorities' failure to hand him his real child, and this is the point shortly to come before the highest Dutch tribunal for decision.

Consumption of Horseflesh in Paris.—The taste for horseflesh is steadily on the increase in Paris. A veterinary and sanitary report just issued states that in 1896 at the public abattoirs 21,430 horses, asses and mules were slaughtered for the different dealers in horseflesh in the French capital. In 1897 the number was 22,029; in 1898, 22,512; in 1899, 23,203; in 1900, 26,484; in 1901, 29,683; in 1902, 32,324. Of the number in this last year there were 31,790 horses, 485 asses and 49 mules. Much of this food is sold in the shape of sausages.

Sydney Milk Supply.—A representative of the AUSTRALASIAN MEDICAL GAZETTE lately paid a visit of inspection to the premises of the Farmers and Dairymen's Milk Company, Limited, Harris-street, Ultimo, and was much struck with the completeness of their plant and machinery. The milk is conveyed from the railway trucks to the premises by two small overhead tramways, and after being weighed and sampled, is at once conveyed to the pasteurising plant, where it is raised to a temperature of 170° F. It is next rapidly cooled, and conveyed to large tanks and kept at a low temperature until delivered. To prevent the separation of the cream the milk is kept constantly in a mild state of commotion by means of "agitators." The milk tasted from one of the tanks was of excellent quality. The tanks when emptied are cleansed and sterilised by steam. Butter, cream and ice are amongst the company's products. Cold storage is also provided. The machinery is of the most up-to-date pattern, and is driven by the steam generated by two large boilers.

The Adelaide Coroner's Work in 1903.—During 1903 the Adelaide City Coroner received 358 reports from the police. This is by far the largest number recorded since the keeping of statistics was started, and the increase is largely due to the fact that all deaths at the Lunatic Asylum are now reported to the coroner. Eighty-one inquests were held last year, compared with 60 in 1902. Suicides numbered 29, or nearly twice as many as occurred in the previous year, and the highest total for the past 11 years. They were classed as follows:—Shooting, 11; cut-throat, 2; hanging, 5; poison, 8; drowning, 2; run over by a train, 1. The accidents investigated by the coroner totalled 18, divided as follows;—Poison, 2; drowning, 2; struck by a windlass, 1; run over by train, 2; fall from a lift, 1; run over by vehicle, 4; falling off a wall, 1; fall from a bridge, 1; fall from a tree, 1; fall from a horse, 1; falling into a creek, 1; fall from a scaffold, 8. There were 32 other fatalities, made up of 9 cases of found drowned, 3 found dead, 13 natural causes, 1 blood poisoning, 1 justifiable homicide, and 5 murders.

UNIVERSITY INTELLIGENCE.

Adelaide.—Faculty of Medicine Pass List.—*First Year:* First Class—H. K. Fry (Elder prize). Second Class—G. R. C. Cotton, D. R. W. Cowan, L. P. Winterbotham. Third Class—L. O. Betts, P. T. S. Cherry, H. Flecker, L. W. Jefferies, A. C. Margarey. R. J. Verco. *Second Year:* First Class—None. Second Class—L. J. Pellew, R. G. Plummer, W. Ray. Third Class—E. W. Griffiths, E. H. Lewis. *Third Year:* First Class—D. Dawson (Davies Thomas scholarship), W. M. Hunn. Second Class—J. V. McAree, F. E. McAree, W. H. Russell. Third Class—R. D. Brummitt. *Fourth Year:* First Class—M. L. Scott (Davies Thomas scholarship), E. H. H. Burnard, Constance May Cooper. Second Class—R. G. Burnard, Phoebe Chapple, A. F. Stokes. Third Class—None. *Fifth Year:* First Class—L. W. Hayward (Everard scholarship), E. J. Stuckey. Second Class—None. Third Class—T. B. Ashton, M. Birks.

Sydney.—Faculty of Medicine Pass Lists.—*First Year.*—Pass—M. Archdall, E. H. Bottrell, E. A. Brearley, G. A. Brookes, F. W. D. Collier, A. E. Colvin, Daisy E. Culpin, A. W. Fox, R. I. Furber, C. B. Geddes, W. E. Giblin, H. D. Matthews, J. S. McFarlane, Mabel Murray-Prior, R. L. de T. Prevost, E. M. Ramsden, H. J. Ritchie, F. C. Rogers, Constance M. Rutherford, B.A., K. St. Vincent-Welch, J. Verge, B.A., B.E., G. L. Tomlinson, C. J. Weedon. Renwick scholarship for general proficiency, E. A. Brearley, M. Archdall, *æq.* Professor Haswell's prize for biology, laboratory notes, M. Archdall, T. Ewing, *æq.* Honours—Chemistry: Class I., E. A. Brearley, G. A. Brookes; Class II., H. D. Matthews, M. Archdall, F. C. Rogers, G. L. Tomlinson. Biology: Class I., G. A. Brookes; Class II., J. Verge, B.A., B.E., M. Archdall, E. A. Brearley, C. J. Weedon, W. E. Giblin. *Second Year.*—Passed with distinction, J. L. Shellshear; passed with credit, J. E. F. Deakin, H. R. C. Poate, C. H. B. Bradley, J. G. Edwards, F. O. Stokes. Pass—H. V. D. Haret, H. O. Chapman, F. Craig, O. A. A. Diethelm, L. B. Elwell, A. MacInnes, B.A., A. J. Mackenzie, Martha I. Ormiston, G. A. Paul, H. E. Pridham, E. H. Rutledge, H. H. Schlink, V. O. Stacy, A. B. Steele, W. Vickers, H. B. Walker-Smith. *Third Year.*—Passed with distinction, T. C. Parkinson (John Harris scholarship); passed with credit, G. H. S. Lightoller, G. Bell, H. C. T. MacCulloch, C. R. Palmer, J. S. Harris, A. C. Cahill. Pass—A. J. Aspinall, Jessie Aspinall, Constance C. Binney, H. C. E. Donovan, Margaret H. Harper, S. H. Harris, A. McKillop, E. H. Molesworth, T. L. O'Reilly, H. W. Palmer, R. A. Parker, C. P. Sapsford, E. A. Wherrett, Mary W. Wylie. *Fourth Year.*—Passed with credit, P. E. Smith, Susannah H. O'Reilly, J. H. McEnroe, F. G. M. Simpson. Pass—J. D. Buchanan, J. Coen, T. B. Clouston, E. Culpin, A. P. Gillespie, J. N. Griffiths, J. J. Holland, W. C. Huggart, B.A., L. P. Johnston, L. Jones, S. Kay, J. R. Leslie, V. McDowall, J. L. McKelvey, J. W. Power, A. S. C. Roberts, C. Shellshear, B. T. Stiles, A. Verge, G. H. Vernon, R. J. N. Whiteman, E. H. Young. *Fifth Year.*—Passed with credit in the subjects of the Fifth Year Examination—C. A. Buchanan, C. S. Browne, T. P. Connolly, Constance E. D'Arcy, G. G. Sharpe, B.Sc., *æq.*; W. Mawson. Pass—F. C. Adams, H. C. R. Bell, V. Benjafield, L. W. Bond, R. S. Godsall, H. O. Lethbridge, M. M. Vernon. Honours at graduation—M.B. and Ch.M.: Class II., G. A. Buchanan, C. S. Browne, T. P. Connolly, G. G. Sharpe, B.Sc., W. Mawson, Constance E. D'Arcy.

PERSONAL ITEMS.

Dr. H. Formby returned to Adelaide from London as surgeon to the Aberdeen liner "Miltiades."

Dr. A. A. Lendon has left by the R.M.S. "Australia" on a three months' holiday in India.

Dr. Dawes has returned to Gawler, South Australia, after a trip to Europe and America.

Dr. Poulton has been re-elected a member of the Council of the University of Adelaide.

Dr. T. Storie Dixson, lecturer on materia medica in Sydney University, has arrived in London after a tour through Canada and the United States. He will visit Scotland and Germany before his return to Sydney.

At a meeting of the Melbourne University Council on December 30th, Dr. W. A. Osborne, M.B., was appointed professor of physiology. Dr. Osborne was one of the three applicants recommended by the University committee in London.

At the Adelaide University commemoration in December a memorial cross was unveiled to perpetuate the memory of Dr. Allan James Campbell, who lost his life while serving as surgeon in the South African war.

Surgeon-General W. D. C. Williams, C.B., P.M.O., of the Commonwealth forces, who recently arrived in England, has been received in audience by the King. It is reported that the Surgeon-General, who rendered good service and won high encomiums on the field during the Boer war, is likely to accept an important appointment in the Imperial army.

Dr. Walter Hull has removed from Cootamundra to Armidale, N.S.W.

Dr. Mackellar has resigned his position as a member of the house committee of the Royal Prince Alfred Hospital, and Sir James Graham has been elected to the position.

Dr. Thomas is to be acting health officer, etc., at Cairns, Queensland, during the absence of Dr. Cumming.

Dr. Angel Money left Sydney on the 28th December on a trip to Vancouver.

Mrs. Brown, relict of the late Dr. Walter Brown, died at Harris Park, Parramatta, N.S.W., on the 27th December, after a brief illness. The deceased, who was 66 years of age, was mother of Dr. W. S. Brown, of Parramatta.

Dr. Bakewell, of Auckland, N.Z., is giving up practice on account of ill-health.

Dr. MacLoughlin, of Rotorua, N.Z., when on a visit to Auckland, was taken ill with influenza. He has now recovered, and has returned home to his practice.

Dr. Romeo, lately practising at Guyra, in New South Wales, has settled at Feilding, N.Z.

Dr. Schumacher, who went home to England about 12 months ago, returned to Auckland via America on the 8th December.

Dr. Butchart has removed from Stratford and commenced practice at Casterton, N.Z.

Dr. Randall Aickin, of Auckland, N.Z., has been appointed house surgeon to the General Hospital, Birmingham.

Dr. Wm. Brown, after a residence of about 30 years, has left Dunedin for Tauranga. On the eve of his departure the doctor was tendered a conversazione by the citizens generally, besides presentations from the Medical Association, golf club and others.

Dr. Church, when leaving Naseby to take over Dr. Brown's practice in Dunedin, was made the recipient of a presentation. Dr. W. C. McKnight succeeds Dr. Church.

Dr. Brugh returned to Dunedin after a holiday tour in Great Britain.

Dr. and Mrs. Earle, of Wanganui, N.Z., will leave for London by the "Gothic," which sails from Wellington early in February.

Dr. Barker, who has been on a two months' holiday to Honolulu, has returned to Sydney.

Dr. David Grant, of Melbourne, has returned from his trip to Great Britain.

Dr. A. Watson Munro has removed from Macquarie-st. to 183A Liverpool-st., Hyde Park, Sydney.

Dr. Thomas Lane has removed from Inverell, N.S.W., to Mosman, Sydney.

Dr. H. Turkington, late of Merriwa, N.S.W., has gone for a trip to New Zealand.

Dr. G. T. Hankins, Hon. Sec. N.S.W. Branch of the British Medical Association, left Sydney for London on January 9th. He expects to be absent from Sydney for six or seven months.

Dr. R. W. McCredie, of Brewarrina, N.S.W., has been appointed to the Commission of the Peace.

The Melbourne Board of Health recently recommended the Minister to grant Dr. Gresswell 12 months' leave of absence on full pay to enable him to visit other countries and gain information on hygienic matters generally. As a reward for his careful work and diligent attention to his duties, Dr. Gresswell is only to be allowed, however, six months' leave on half pay. This is the sort of encouragement meted out to a medical man for spending his best days and energies in the service of the State on a comparatively small salary.

PRACTICES FOR SALE.

N.S.W.—Cash take, £1300; appointments, £400. Price, £250.

N.S.W.—Cash take, £500. Price, £100; terms if required. Good district.

N.S.W.—Cash take, £600. Price, £300. Appointments, £200; suit R.C. Good town.

QUEENSLAND.—Cash take, £1000; appointments, £375. Price, £350. Coastal town.

N.Z.—Cash take, £900; appointments, £186. Price, £250. Unopposed. Specially recommended.

N.Z.—Cash last 2 years, £2500 p.a.; established 27 years; average income, £1800. Price, £800; £500 down.

Thirteen other practices are available in N.Z., including one city of Wellington; one is available city of Hobart.

Openings available N.S.W.; guarantees £200 to £300. Incomes about £500.

MR. F. W. LOXTON,
16 O'Connell-street, Sydney.—[ADVT.

Dr. Felix Meyer, Hon. Surgeon to the Women's Hospital, Melbourne, has been granted one month's leave of absence from January 8th.

Dr. R. Scot Skirving is leaving Sydney on January 23rd for a six months' trip to Europe.

MEDICAL APPOINTMENTS.

NEW SOUTH WALES.

Schuette, R. W., M.D. (Leipsic), to be Government Medical Officer and Vaccinator at Merriwa, *vice* Dr. H. Turkington, resigned.

Scott, H. J. H., M.R.C.S. (Eng.), J.P., to be Deputy Licensing Magistrate of the Licensing Court for the Licensing District of Scone, during the absence of C. H. Gale, P.M.

VICTORIA.

Osborne, W. A., M.B., B.S. (Royal University, Ireland), to be Professor of Physiology, University of Melbourne.

QUEENSLAND.

Ffrost, Albert Ernest, M.B., B.S. (Melb.), to be Acting Health Officer, Acting Medical Officer, Acting Visiting Surgeon of the Penal Establishment at Townsville, and Acting Medical Superintendent of the Quarantine Station at Magnetic Island, during the absence of Ernest Humphry, L.S.A.L.

Hare, Francis Washington Everard, M.R.C.S. (Eng.), M.D., to be Visiting Medical Officer to the Diamantina Hospital for Chronic Diseases, South Brisbane.

Marks, Hon. Charles Ferdinand, M.D. (Irel.), M.L.C., to be Acting Medical Officer, Acting Visiting Surgeon to the Lock Hospital, and Acting Visiting Surgeon to the Prisons at Brisbane, during the absence of Joseph Espie Dods, M.B., B.S. (Edin.).

McDonald, James Edward Fancourt, M.B., B.S. (Melb.), to be Acting Visiting Surgeon to the Penal Establishment at St. Helena, during the absence of Joseph Espie Dods, M.B., B.S. (Edin.).

Thomas, George Henry Warren, M.R.C.S., L.R.C.P., to be Acting Medical Officer, Acting Health Officer, and Acting Visiting Surgeon of the Prison at Cairns, during the absence from duty of William Cumming, M.B., M.D.

SOUTH AUSTRALIA.

Kennedy, Jacob Bruce, M.D., J.P., of Hergott, to be a Commissioner for taking Affidavits in the Supreme Court.

The undermentioned persons have been appointed Public Vaccinators for the districts set opposite their names, viz.:—

Edgelow, Samuel Henry, M.R.C.S., Streaky Bay.

Magee, Charles Crozier, M.R.C.S., Penola.

WEST AUSTRALIA.

Farmer, Dr. William, to be Officer of Health at Busselton, *vice* Dr. Hungerford, resigned.

Grey, William Charles, M.B., Ch.M. (Syd.), to be Public Vaccinator and Health Officer at Bulong.

Griffith, J. De Burgh, to be Physician to Out-patients, Perth Public Hospital, *vice* Victor Black, resigned; also to be Acting District Medical Officer and Quarantine Officer at Carnarvon during the temporary absence of J. R. Hickenbotham.

Moloney, P. J., to be Acting District Medical Officer and Public Vaccinator at Menzies during the absence on leave of Dr. Corlis.

TASMANIA.

Cummings, H. L., L.R.C.P., M.R.C.S., to be Officer of Health of Scottsdale.

Parker, Chas., M.B., Ch.M., has been re-appointed to the Hon. Medical Staff of the Launceston Hospital.

Willmot, Robert, M.R.C.S., F.R.C.S., L.S.A., to be Official Visitor of the Hospital for Insane, New Norfolk.

NEW ZEALAND.

The undermentioned to be Public Vaccinator for the district set opposite his name:—

Menzies, William Percy, L.R.C.P., L.R.C.S. (Edin.), District of Bay of Islands.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

NEW SOUTH WALES.

Duka, Albert Theophilus, L.S.A. (Lond.), 1891; M.R.C.S. (Eng.), 1892; L.R.C.P. (Lond.). 1892.
Dunwoody, Arthur David, L. *et* L. Mid. R.C.P. (Irel.), 1900; L. *et* L. Mid. R.C.S. (Irel.), 1900.
Horsfall, William Nichols, M.B., B.S. (Melb.), 1902.
Adams, Francis Charles Somerset, M.B. (Syd.).
Baur, Georg, M.D. (Munich), 1894; State Exam. Certif. (Munich), 1894.
Benjafield, Nivian, M.B. (Syd.).
Bond, Lionel Wilfred, M.B. (Syd.).
Buchanan, George Arthur, M.B. (Syd.).
Connolly, Thomas Patrick, M B. (Syd.).
D'Arcy, Constance Elizabeth, M.B. (Syd.).
Lethbridge, Harold Octavius, M.B. (Syd.).
Manchester, Percival Frank, L.R.C.P. (Edin.), 1901; L.R.C.S. (Edin.), 1901; L.F.P.S. (Glasg.), 1901.
O'Brien, Mark, L R.C.P. (Edin.), 1896; L.R.C.S. (Edin.), 1896; L F.P.S. (Glasg.), 1896.
Riolo, Guiseppe, M.D., Ch.D. (Palermo), 1900.
Ross, James MacBain, M.R.C.S. (Eng.), 1901; L.R.C.P. (Lond.), 1901.
Webster, Edgar Ernest, M.B., Ch.B. (Melb.), 1899.

For Additional Registration.

Lester, Charles Edward, F.R.C.S. (Edin.), 1903.
Patton, Alexander Stoney, M.D. (Dubl.), 1889.

SOUTH AUSTRALIA.

Edgelow, Samuel Henry, M.R.C.S. (Eng.), 1877.
Magee, Charles Crozier Tandy, M.R.C.S. (Eng.), L.R.C.P. (Lond.), 1901.

QUEENSLAND.

Harlin, Francis Wilfred, L.R.C.P.S. (Edin.), 1900; L.F.P.S. (Glas.), 1900.

TASMANIA.

Elkington, John Simeon Colebrook, L.R.C.P. (Edin.), L.R.C.S. (Edin.), L.F.P.S. (Glasg.), 1896; M.D. (Brux.), 1901; D.P.H., R.C.S. (Eng.), R.C.P. (Lond.), 1902.

BIRTHS.

DAWKINS.—On November 11th, at Hamley Bridge, S.A., the wife of Dr. Dawkins—a son.

HOLMES.—On December 22nd, at Warialda, N.S.W., the wife of H. G. Holmes, M.B. and Ch.M.—a daughter.

HALL.—November 30th. at Glenalvon, Manly, Sydney, the wife of G. R. P. Hall, M.B., Ch.M.—a daughter.

LANGTON.—November 18th, at 45 Castlereagh-street, Redfern, Sydney, the wife of Dr. F. W. Langton—a son.

LETTERS AND OTHER COMMUNICATIONS HAVE BEEN RECEIVED FROM:—

Dr. H. Horrocks, Perth, W.A.; Dr. E. Cuthbert Hall, Parramatta, N.S.W.; Dr. A. J. Brady, Sydney; Dr. Clay, Hornsby; the Government Statistician, Sydney; Mr. G. H. King, Department Public Health, Sydney; Mr. G. T. Taylor, Hobart; Dr. Houison, Sydney; Dr. John Thomson, Brisbane; Dr. G. H. Hogg, Launceston; Dr. H. C. Hinder, Sydney; Dr. Purser, Lewisham; Dr. L. W. Bickle, Adelaide; Dr. Fieldstad, Rotorua, New Zealand; Dr. G. S. Samuelson, Armidale; Dr. G. Gore Gillon, Auckland; Dr. T. K. Hamilton, Adelaide; Dr. A. B. Brockway, Brisbane.

BOOKS RECEIVED.

Catechism Series: Physiology. Part IV. Edinburgh: E. & S. Livingstone. Price, 1s.

Congenital Dislocation of the Hip and Lorenz's Method of Treating it. By J. Jackson Clarke, M.B. (Lond.), F.R.C.S. Reprinted with additions from the *Practitioner* of March, 1903. Illustrated. London, E.C.: *The Practitioner*, Ltd. Price, 1s net.

The Commonwealth Dental Review. Vol. I., No. 1. Edited by Charles Hall. Sydney: Websdale, Shoosmith & Co., 117 Clarence-street.

The After-Treatment of Operations: A Manual for Practitioners and House Surgeons. By P. Lockhart Mummery, F.R.C.S. (Eng.). Paris, London, and Madrid: Baillière, Tindall and Cox. Sydney: L. Bruck. Price, 5s net.

Handbook of Diseases of the Ear, for the use of students and practitioners. By Richard Lake, F.R.C.S. (Eng.), Surgeon Royal Ear Hospital, Lecturer on Practical Otology, Medical Graduates College. With three coloured plates. London: Baillière, Tindall & Cox. Sydney: L. Bruck. 1903. Crown 8vo. Price, 6s net.

The Purin Bodies of Foodstuffs and the Rôle of Uric Acid in Health and Disease. By I. Walker Hall, M.D., Assistant Lecturer and Demonstrator in Pathology, Owen's College, Manchester. Second edition, revised. Manchester Medical Handbooks. London: Sherratt and Hughes. 59 Long Acre, W.C. Manchester: 27 St. Ann-street. 1903. Price, 4s 6d net.

Report of the Public Library, Museum, and Art Gallery of South Australia for 1902–03.

The Care of the Baby: A Manual for Mothers and Nurses. By J. C. P. Griffith, M.D. Third edition, revised. Philadelphia, New York, London: W. B. Saunders & Co. Melbourne: J. Little. Price, 7s 6d. 1903.

The Hygiene of Transmissible Diseases: their Causation, Modes of Dissemination and Methods of Prevention. By A. C. Abbott, M.D. Second edition, revised and enlarged. Philadelphia and London: W. B. Saunders. Melbourne: J. Little. Price, 12s 6d. 1901.

A Manual of Medicine. Edited by W. H. Allchin, M.D. (Lond.), F.R.C.P., F.R.S. (Ed.), Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital. Vol. V., Diseases of the Digestive System and of the Liver, Diseases of the Peritoneum and of the Vessels of the Abdomen, Diseases of the Kidneys, Diseases of the Ductless Glands. London: MacMillan & Co., Ltd. 1903. Price, 10s net.

The Bombay Medical and Physical Society. Report of meeting held on September 18th, 1903.

The Nutrition of the Infant. By Ralph Vincent, M.D., F.R.C.P., Physician to the Infants' Hospital. London: Baillière, Tindall & Cox, 3 Henrietta-street. Sydney: L. Bruck. 1904. Demy 8vo. Price, 10s 6d net.

A Thesaurus of Medical Works and Phrases. By W. M. Barton, M.D., and W. A. Wells, M.D., Philadelphia. London: W. B. Saunders & Co. Melbourne: J. Little. Price, 12s 6d plain; indexed, 15s. 1903.

A Text-Book of Materia Medica, Therapeutics and Pharmacology. By G. F. Butler, Ph.G., M.D. 4th ed., revised. Philadelphia and London: W. B. Saunders & Co. Melbourne: J. Little. Price, 17s 6d. 1902.

The American Text-Book of Obstetrics Edited by R. C. Norris, M.D. Vol. I. Philadelphia and London: W. B. Saunders and Co. Melbourne: J. Little. Price, two volumes, 32s 6d. 1903.

A Book of Detachable Diet Lists and a Sick Room Dietary. Compiled by J. B. Thomas, jun., M.D. Second edition, revised. Philadelphia: W. B. Saunders & Co. Melbourne: J. Little. Price, 6s 6d. 1900.

Human Physiology for Students of Medicine. By J. W. Raymond, M.B. Second edition. Re-written. Philadelphia and London: W. B. Saunders & Co. Melbourne: J. Little. Price, 17s 6d. 1901.

A Text-Book of Diseases of Women. By C. B. Penrose, M.D., Ph.D. Fourth edition, revised. Philadelphia and London: W. B. Saunders & Co. Melbourne: Jas. Little. Price, 18s 6d. 1902.

HUDSON'S "EUMENTHOL" JUJUBES (Registered) are a Gum Jujube containing the active constituents of well-known Antiseptics, Eucalyptol, Thymus Vulg., Pinus Sylvestris, Mentha Arv., with Benzo-Borate of Sodium, etc., and exhibit the antiseptic properties in a fragrant and efficient form. Sold by all chemists; tins, 1s 6d. Are Antiseptic, Prophylactic, reduce Sensibility of Mucous Membrane. Mr. W. A. Dixon, F.I.C., F.C.S., Public Analyst of Sydney, after making exhaustive tests, says:—"There is no doubt but that 'Eumenthol' Jujubes have a wonderful effect in the destruction of bacteria and preventing their growth. . . . I have made a comparative test of 'Eumenthol' Essence and Creosote, and find that there is little difference in their bactericidal action."—[ADVT.]

AUSTRALASIAN MEDICAL GAZETTE.

A FIRST SERIES OF ONE HUNDRED ABDOMINAL SECTIONS FOR PELVI-ABDOMINAL DISEASE.

By Fourness Barrington, M.S. (Edin.), F.R.C.S. (Eng.), Surgeon to the Lewisham Hospital for Women and Children, Sydney.

ABDOMINAL operations are now performed, thanks to comparatively recent rapid advances in technique, with such satisfactory results that a further record of a series seems superfluous. While from these a small proportion can be gleaned of interest from a clinical and surgical standpoint, my purpose is rather to raise certain moot points in connection with the general technique and post-operative treatment.

This series embraces consecutive cases occurring in hospital and private practice up to the date of the last-named (July 21st, 1903), and is my entire personal operative experience in this branch of gynæcological surgery. Appended is a table showing bare details of each individual case, classified according to the operation needed.

The Making and Closure of the Parietal Incision.—It is advisable in opening the abdomen that the fibres of the recti muscles be injured as little as possible in the whole length of the wound, so as not to interfere with their vitality or injure their nerve supply. In spite of weighty authorities (Cheyne and Burghard, Warren and Gould) who advocate separation of muscular fibres, so as to leave a good portion of muscle on the inner side of cleavage, I cannot think the principle is sound. Separation of muscular fibres involves division of nerves, and cutting off the distal portion of the muscle from its trophic centre, with possible resultant atrophy. Scissors should never be used in prolonging the original incision, as they contuse the edges of the wound and thus conduce to defective union.

The tier-suture is, to my mind, the only scientific method of closure of the abdominal wound, if it be conceded that the one and only structure, the complete and perfect union of which renders post-operative hernia impossible, is the fascia. These fascial apposition sutures should be passed only through the aponeurosis itself, and no other tissue, and be absorbable and capable of resisting absorption for at least a month. It is entirely unnecessary to approximate the muscles. Nothing can be worse than attempting to unite the dynamic muscle and static aponeurosis by including both in each loop of suture. The suture only cuts through the tender muscle, in time becoming loose, and instead of accurate aponeurotic coaptation, weak, gaping points occur. These becoming filled with granulation tissue, one of the most yielding structures in its early life, the foundation of a subsequent hernia is laid.

The Question of Drainage.—My rule is to avoid drainage as far as possible. Should pelvic drainage be necessary, I now prefer to drain in every case through the posterior fornix vaginæ. The pelvis, after suitable cleansing, as far as necessary, is packed with sterile gauze, which isolates the involved field and subsequently removes noxious products. The abdomen is then closed, and the patient being placed in the lithotomy position an incision is made in the posterior fornix through which the end of the pelvic gauze is drawn, the vagina below being canalised by gauze. Such drainage opening should be made freely, and being dependent, so drainage by this route is thorough, a contention which is strongly supported by the almost entire absence of septic peritonitis after vaginal hysterectomy. Such a drain should be removed in 48 hours.

Drainage through the parietal wound has been abandoned. In spite of every precaution pus will occasionally escape during the enucleation of diseased structures in the pelvis. After the escape of such contaminating material, every precaution is taken to prevent the spread of infection in the subsequent cleansing of the pelvis. Postural drainage is then utilised by allowing a quart of sterile normal saline to run into the abdominal cavity, with the patient in Trendelenberg's position. This method of drainage is advisable in most of those sections for pelvi-abdominal disease when a safeguard against subsequent septic infection is required.

Conservative Surgery of the Uterine Appendages.—The general trend of modern surgery is towards conservatism in its widest sense. Careful watching of cases has taught that by allowing time for the natural reparative processes, much inflammatory pelvic

TABLE OF 100 CONSECUTIVE ABDOMINAL SECTIONS FOR PELVI-ABDOMINAL DISEASE.

I.—TWENTY-ONE CONSECUTIVE CASES OF COMPLETED OVARIOTOMY.

Serial No.	Name.	Age. M. or S.	Date of Operation.	Nature of Case.	Operation.	Result.
1	A.L.	41 M.	4th Oct., 1898	Cystic ovaries	Double ovariotomy	R
3	J.C.	28 S.	22nd Nov., 1898	Broad ligament cyst	Enucleation	R
6	A.L.	31 M.	6th Dec., 1898	Ovarian cystoma and myoma uteri	Double ovariotomy	R
8	A.C.	27 M.	7th Feb., 1899	Ovarian cystoma.	Ovariotomy	R
10	S.G.	15 S.	21st Feb., 1899	,, ,,	,,	R
23	Miss F.	40 S.	14th May, 1900	Double ovarian dermoid	Double ovariotomy	R
24	E.A.	35 M.	30th May, 1900	Ovarian cystoma	Ovariotomy	R
30	H.J.	61 M.	18th Dec., 1900	,, ,,	,,	R
43	V.B.	25 S.	28th Aug., 1901	Double ovarian dermoid	Double ovariotomy	R
46	A T.	29 M.	23rd Sept., 1901	Ovarian cystoma	Ovariotomy	R
51	E.S.	62 M.	9th Oct., 1901	Semi-solid ovarian tumour	,,	R
58	G.H.	44 M.	8th Nov., 1901	Ovarian cystoma	,,	R
59	M.M.	49 M.	20th Nov., 1901	Double ovarian cystoma	Double ovariotomy	R
61	E.B.	46 M.	27th Nov., 1901	Broad ligament cyst	Enucleation	R
64	M.G.	23 S.	8th Jan., 1902	Double broad ligament cysts	Double ovariotomy	R
73	I.S.	32 M.	23rd July, 1902	Ovarian dermoid	Ovariotomy	R
76	A.G.	45 M.	6th Aug., 1902	Papillomatous broad ligament cysts	Enucleation	R
84	Mrs. B.	26 M.	12th Nov., 1902	Broad ligament and ovarian cyst	Ovariotomy	R
97	E.K.	32 S.	10th June, 1903	Ovarian cystoma	,,	R
98	E.H.	31 M.	15th June, 1903	Ovarian dermoid	,,	R
100	A.F.	36 M.	21st July, 1903	Ovarian cystoma	,,	R

II.—SEVENTEEN CONSECUTIVE CASES OF HYSTERECTOMY.

(a) ELEVEN FOR MYOMA UTERI.

12	J.P.	34 S.	30th May, 1899	Myoma uteri	Supravaginal hysterectomy	R
16	H.M.	26 S.	4th Jan., 1900	,, ,,	Vaginal hysterectomy	R
18	J.B.	39 M.	2nd Feb., 1900	Broad ligament myoma & double ovarian cystoma	Supravaginal hysterectomy	R
26	E.B.	40 S.	22nd Aug., 1900	Myoma uteri	,, ,,	R
56	A.B.	49 M.	6th Nov., 1901	,, ,,	,, ,,	R
65	E.B.	37 M.	22nd Jan., 1902	,, ,,	,, ,,	R
66	M.G.	29 S.	16th April, 1902	,, ,,	,, ,,	R
74	K.W.	48 W.	23rd July, 1902	Double pyosalpinx and myoma uteri	,, ,,	R
82	I.B.	52 M.	27th Oct., 1902	Myoma uteri	,, ,,	R
89	J.I.	28 S.	25th Feb., 1903	,, ,,	,, ,,	R
95	A.M.	38 S.	13th May, 1903	Broad ligament and uterine myoma	,, ,,	R

(b) SIX FOR MALIGNANT DISEASE OF UTERUS.

4	A.M.	53 M.	25th Nov., 1898	Carcinoma of cervix	Vaginal hysterectomy	R*
17	H.C.	36 S.	25th Jan., 1900	Myxo-sarcoma uteri	,, ,,	R†
36	A.C.	46 M.	1st July, 1900	Carcinoma of cervix	Abdominal hysterectomy	R†
37	C.B.	51 M.	17th July, 1900	Carcinoma of body	,, ,,	R†
79	M.M.	50 S.	11th Sept., 1902	,, ,,	,, ,,	R†
86	Mrs. B.	54 M.	17th Jan., 1903	Carcinoma of body (old pelvic peritonitis)	,, ,,	D

* Died 4½ years later. † Alive and well.

disease ultimately subsides, and, as a consequence, operations on the uterine appendages are not undertaken so early or readily as formerly. The opening of acute pus sacs from below by Hilton's method, with subsequent free drainage, has spared many appendages and saved many lives. There remains a considerable residuum where the crippling effects of inflammation remain, either as adhesions, tubal occlusion, or pus formation, and surgical intervention is called for the resultant disability.

Under the general head of conservatism, the following propositions are ventured :—

1. Separation of adhesions and suture of displaced organs (uterus and ovaries) to their normal level is advisable when there is no apparent disease of the appendages.

2. Conservative surgery of the ovaries is to be strongly commended. Usually, in operating

III.—Thirty-five Consecutive Abdominal Cœliotomies for Disease of the Appendages.

Serial No.	Name.	Age. M. or S.	Date of Operation.	Nature of Case.	Removal of—	Result.
2	J.O.	30 S.	15th Nov., 1898	Double pyosalpinx	Both appendages	R
7	A.H.	27 M.	16th Jan., 1899	Ectopic gestation	Left tube and ovary	R
9	E.C.	27 M.	14th Feb., 1899	Double hydrosalpinx, cystic ovaries	Both appendages	R
13	M.S.	27 S.	22nd Aug., 1899	Hydrosalpinx	Right tube and ovary	R
15	M.P.	28 M.	27th Oct., 1899	Double pyosalpinx	Both appendages, except right ovary	R
22	A.S.	35 M.	25th April, 1900	Ectopic gestation	Left appendage	R
25	L.S.	23 M.	15th Aug., 1900	Matted appendages	Right appendage	R
31	I.S.	30 S.	18th Dec., 1900	Chronic salpingitis	Both tubes	R
32	N.F.	27 M.	17th Jan., 1901	Ruptured ectopic gestation, hydrosalpinx	,, ,,	R
33	J.B.	22 S.	22nd April, 1901	Double pyosalpinx	Both appendages, except left ovary	R
34	N.P.	23 S.	29th May, 1901	,, ,,	Both appendages	R
35	C.M.	36 M.	12th June, 1901	Double ovarian abscess	,, ,,	R
41	M.J.	20 M.	14th Aug., 1901	Pyosalpinx	Left tube	R
47	M.S.	24 S.	25th Sept., 1901	Tubo-ovarian abscess	Right tube and ovary	R
48	E.B.	30 M.	29th Sept., 1901	Pyosalpinx	Left tube	R
49	R.W.	26 M.	3rd Oct., 1901	Uterus bicornis, right pyosalpinx, left ovarian cyst, left hydrosalpinx	Left appendage & right tube	R
50	Mrs. H.	43 M.	5th Oct., 1901	Chronic salpingo ovaritis, encysted perimetritis	Both appendages	R
52	H.B.	35 M.	23rd Oct., 1901	Double pyosalpinx	,, ,,	R
57	M.F.	32 M.	6th Nov., 1901	Double pyosalpinx, left broad ligament cyst, right ovarian cystoma	,, ,,	R
62	Mrs. F.	33 M.	30th Nov., 1901	Ectopic gestation	Left tube and ovary	R
63	E.C.	30 M.	20th Dec., 1901	Incomplete tubal abortion — right hæmato-salpinx	Both tubes	R
67	H.W.	32 M.	30th April, 1902	Double pyosalpinx	,, ,,	R
68	A.H.	30 M.	21st May, 1902	,, ,,	Both tubes and left ovary	R
69	A.S.	29 M.	5th June, 1902	Ectopic gestation	Left tube	R
70	Mrs. M.	32 M.	16th June, 1902	Ruptured ectopic gestation	Right tube	R
72	Mrs. L.	40 M.	15th July, 1902	Double pyosalpinx	Both appendages, except right ovary	R
75	C.B.	19 M.	30th July, 1902	Incomplete tubal abortion	Left tube	R
77	A.W.	45 M.	20th Aug., 1902	Double pyosalpinx	Both appendages	D
78	A.T.	20 M.	4th Sept., 1902	Ruptured pyosalpinx, diffuse abdominal suppuration	Right appendage	D
81	A.O.	27 S.	22nd Oct., 1902	Pyosalpinx	Left tube	R
80	E.H.	29 M.	12th Sept., 1902	,,	Right appendage	R
87	C.H.	30 M.	4th Feb., 1903	Double pyosalpinx	Both appendages, except left ovary	R
91	A.P.	28 M.	2nd March, 1903	Ovarian abscess	Left appendage	R
92	D.C.	20 M.	1st April, 1903	Pyosalpinx	Right tube	R
96	E.G.	37 M.	27th May, 1903	Double pyosalpinx	Both appendages, except right ovary	R

IV.—One Case of Cæsarean Section.

Serial No.	Name.	Age. M. or S.	Date of Operation.	Nature of Case.	Operation.	Result.
14	Mrs. A.	30 M.	Sept. 23rd, 1901	Labour obstructed by adherent and impacted ovarian cystoma	Cæsarean section and ovariotomy	R.

for myoma uteri, and in most cases of pyosalpinx, one or both, or at least part of an ovary should be left. Physiologically there is a great difference between a woman with part of a healthy ovary and a woman with none. A healthy ovary should never be removed on the ground of its abandonment complicating an operation: the spending of a little extra time saves a useful organ to the infinite advantage of the patient.

3. Conservative operations on the tubes are of more doubtful utility. A tube visibly distended with blood or serum should be removed as being functionless, and therefore

V.—TWENTY-ONE CASES OF VENTROSUSPENSION OF UTERUS AND CONSERVATIVE OPERATIONS (UNSPECIFIED).

Serial No.	Name.	Age. M. or S.	Date of Operation.	Nature of Case.	Operation.	Result.
5	F.D.	46 M.	2nd Dec., 1898	Procidentia uteri	Ventrofixation	R
11	A.B.	30 M.	25th April, 1899	Adherent retroflexion	Ventrosuspension	R
19	E.B.	31 M.	2nd Feb., 1900	Adherent retroflexed pregnant uterus	Liberation of adhesions	R
20	L.W.	20 M.	20th Mar., 1900	Adherent retroflexion & prolapsed ovaries	Ventrosuspension	R
21	E.M.	49 M.	3rd April, 1900	Procidentia uteri	Ventrofixation	R
28	A.W.	29 M.	7th Nov., 1900	Adherent retroflexion	Ventrosuspension	R
29	M.F.	49 M.	7th Nov., 1900	Procidentia uteri	Ventrofixation	R
38	C.C.	25 M.	18th July, 1901	Matted appendages	Liberation of adhesions	R
40	M.C.	30 M.	7th Aug., 1901	Procidentia uteri	Ventrosuspension	R
42	C.B.	32 S.	21st Aug., 1901	Retroflexion & adherent prolapsed ovaries	,,	R
44	M.K.	20 S.	11th Sept., 1901	Matted appendages, cystic ovary	Separation of adhesions and resection of ovary	R
45	E.R.	44 M.	11th Sept., 1901	Adherent retroflexion	Ventrosuspension	R
54	M.G.	33 M.	30th Oct., 1901	,, ,,	,,	R
55	Mrs. S.	31 M.	5th Nov., 1901	,, ,,	,,	R
60	E.W.	48 M.	20th Nov., 1901	Procidentia uteri	Ventrofixation	R
71	C.S.	29 M.	9th July, 1902	Prolapsed adherent ovaries	Separation of adhesions and fixation of ovaries	R
83	F.O.	28 M.	3rd Nov., 1902	Pelvic adhesions from previous cœliotomy	Separation of adhesions	R
88	A.M.	30 M.	11th Feb., 1903	Adherent retroflexion	Ventrosuspension	R
90	J.B.	26 M.	25th Feb., 1903	Cystic ovary	Resection of ovary	R
93	Mrs. A.	31 M.	2nd May, 1903	Adherent retroflexion	Ventrosuspension	R
94	Mrs. A.	30 M.	6th May, 1903	Matted appendages	Separation of adhesions	R

VI.—FIVE CASES OF EXPLORATORY INCISION.

27	A.H.	35 M.	1st Oct., 1900	Tubercular pelvic peritonitis (encysted)	Incision and irrigation	R
39	A.H.	41 M.	30th July, 1901	Pelvic suppuration	Incision and drainage per vaginam	D
53	T.C.	29 S.	23rd Oct., 1901	Tubercular pelvic peritonitis	Irrigation	R
85	S.R.	62 M.	24th Nov., 1902	Malignant ovarian tumour	Subsequent inguinal colotomy for intestinal obstruction	R
99	T.C.	32 M.	6th July, 1903	Tubercular pelvic, peritonitis (retroflexion of uterus)	Irrigation and ventrosuspension.	R

useless. If there be the least suspicion of pus on opening and pressing a tube it should be condemned. In opening occluded tubes, after estimating their permeability, I usually wash them out with peroxide of hydrogen, and then normal saline. An artificial ostium should be amply large, and after uniting the inner and outer tubal coats, the ovary should be sutured into the window of the oviduct to prevent its reclosure.

My guide in cases of tubal conservatism has been largely the wishes of the patient, due latitude being conceded me. In putting such a matter to a female before operation, the attendant drawbacks are clearly pointed out, and the ultimate possibilities viewed more from the seamy than the rosy aspect. Guided in this way I have on several occasions removed a suppurating tube on one side, leaving the appendage on the other side because it was apparently healthy after its release from adhesions. The principle which advocates complete ablation of the appendages, when one side needs removal, is not sound in the present state of our knowledge.

Tubal conservatism in a woman of 25 would be a judicious procedure, whereas in one near the menopause it would serve no purpose.

4. All conservatism, and, I would add, all abdominal operations for infective disease of the uterine adnexa, should be immediately preceded by curetting of the uterus with a sharp instrument. The uterus is the *fons et origo mali* and ensuring a healthy endometrium is a *sine qua non* for success.

The Rôle of the Vermiform Appendix.—This vestigial structure is so frequently involved in pelvi-abdominal lesions that, as a matter of routine, it should be inspected in all operations of this nature. The frequency of its involvement by adhesions in infective lesions of the uterine appendages is one of the strongest points in favour of dealing with these cases by the suprapubic route.

In this series the vermiform appendix was adherent in 13 cases, and in 11 was removed on account of obvious disease or its adherent condition, eight times in cases of double pyo-salpinx, twice in ovarian cystomata (in one with acute pedicle torsion), once in uterine myoma.

The following propositions are ventured:—

1. The appendix should be removed when diseased or involved by adhesions to pelvic viscera.

2. Recurrent attacks of right-sided pelvic pain should lead to an investigation of the appendix as well as the appendages. Case 93 was one of this kind; the uterus was backwardly displaced and fixed with matted appendages. The appendix, found after a mesial incision, sequestered except at its tip by a roll of omentum, much enlarged, was removed. After relieving the uterus and appendages from their bondage of adhesions the former was ventropoised.

3. In operating for relapsing appendicitis in females suffering from dysmenorrhœa referable to the right side of the pelvis, especially with febrile exacerbations at the menstrual periods, the right ovary and tube should be examined through an incision in the rectus sheath immediately internal to the right semilunar line. The gridironed classic incision does not give efficient access for this purpose.

4. In every case of appendicitis in the female a careful pelvic examination should be made before operating, and in single women, to avoid errors, is most efficiently carried out under an anæsthetic. The invariable carrying out of this rule will prevent both mistake and disappointment. A preliminary examination can be made with rubber gloves, and the operation, guided by the information obtained, completed with one administration of anæsthetic.

The Mortality.—In this series there have been four deaths. One (No. 39) was a case of pelvic suppuration of years' standing, in which at the operation the omentum and intestines were matted over a large collection of pus in the pelvis, and in which no trace of uterus, tubes, ovaries, or round ligaments could be made out; the second (case No. 76) was one of double pyo-salpinx. In the latter the appendages were completely removed, and in both, the pelvis, after careful cleansing, was packed with gauze, and subsequently the gauze drawn through a free incision in the posterior fornix. Looking back on these cases, I cannot but feel had I carried out the rule which I had long before formulated for my guidance—in all acute cases of pelvic suppuration, and in all large chronic collections of pus, an endeavour should be made to evacuate such by Hilton's method through the posterior fornix vaginæ—these patients would still be alive. Truly our mistakes are our great masters, and act in safeguarding life subsequently.

The third case (No. 85) died after abdominal hysterectomy for malignant disease of the body of the uterus. Although inclined at the time to attribute the untoward result to heart failure, the thought remains with me as a nightmare that the patient died of acute septic peritonitis, from some flaw in technique for which I am alone responsible. Shock and heart failure—while convenient terms for filling up death certificates, impressing sorrowing relatives and distressed friends, and soothing the operator's conscience—are, to my mind, extremely rare causes of death. That they are possible causes of a fatal issue must be admitted, but they are so closely simulated by acute septic infection and excessive blood loss that these must be excluded before such a cause can be accepted.

The fourth death (No. 77) could not be attributed to operative interference. The patient was suffering from general septic infection, following a ruptured pus-sac, and the operation was carried out at the solicitation of the friends as the only hope of saving life.

To ensure the promotion of early intestinal peristalsis is the only point raised in the post-operative treatment. All agree on the advisability of thorough evacuation of the bowels before abdominal section, and if this preliminary purgation has been efficiently carried out, the intestines will be found collapsed in their entire extent at the time of operation. The bowels being empty, why do we prevent intestinal paralysis by early purgation?

Muscatello proved by carmine injection into the peritoneal cavity of dogs that the granules were absorbed by the leucocytes, and carried upwards to the diaphragm, through the intra-thoracic lymphatics to the lymphatic glands in various parts of the body, and this took place much more rapidly when the animal was suspended head downwards. These peritoneal currents depend on the rhythmical movements of the diaphragm and the vermicular action of the intestines. We have no power of assisting the first named, but the latter is greatly under our control. After abdominal section, the small intestine should be excited to act without delay; not in order to evacuate its contents, but to produce and maintain these intra-peritoneal currents which convey stray micro-organisms from a suitable nidus rapidly into the lymphatics, and finally into the general circulation, where they will be destroyed by leucocytosis. An additional reason for not permitting such stray germs to remain quiescent is their power of producing toxins, which may inhibit the vermiucular action of the bowel wall and nullify later endeavours to excite peristalsis.

I have endeavoured for the past four years to ensure these early peritoneal currents by giving 5 grains of calomel an hour and a half before operation, and I am unaware of anyone adopting this precise method before. In addition, if the case be septic, two drachms of magnesium sulphate in concentrated solution, with lemon juice, is given to the patient immediately before going into the operating theatre. This saves the aggravation of vomiting, by subsequently endeavouring to get the patient to keep an aperient down; and since adopting this method it has been much easier to get the bowels to promptly respond to suitable measures.

Further, the foot of the bed should be well raised after cœliotomy; for, while subserving other good effects, it primarily enlists the force of gravity, and in septic cases this posture, with a quart of normal saline left in the abdomen, does good by augmenting the enormous absorbing capacity of the peritoneum, and by increasing the lymph-stream through the diaphragm.

Early peristalsis tends to prevent post-operative adhesions, which are prone to occur between the serous coat of the intestine and raw connective tissue surfaces which cannot be sequestered—a not infrequent source of post-operative pain.

(Read before the New South Wales Branch of the British Medical Association.)

Professor Franz Himstedt, of the Physical Institute of the University of Freiburg, Baden, has concluded a series of experiments which would seem to tend towards a new conception of the properties of radium. He has examined a number of water and petroleum springs, the products of which give out a radio-active gas which is very similar to, if not identical with, the emanations of radium. Professor Himstedt is inclined to believe that the peculiar radiation which is generally attributed to radium alone is in reality to be met with in a great number of substances. Radium, therefore, would, with regard to these particular rays, not stand out alone among all other substances, but only be different as to strength of the radiation.

INFANT MORTALITY AND INFANT FEEDING.

By William S. Byrne, M.D. (Dub.), M.R.C.P. (Lond.), Brisbane.

According to the statistics of the Registrar-General of Queensland for 1902, the mortality rate of children under one year of age is 10·25 per cent. or, in other words, 1¼ infants out of every 10 die before reaching the age of twelve months. The death-rate for all ages is 12·08 per thousand. The death-rate for those under one year is 107·46 per thousand. The proportion of infant mortality to total deaths is 23 per cent. in populous centres, but in some centres the mortality is enormous; for instance, the proportion in Enoggera and Mount Morgan is 40·63 per cent. and 31·40 per cent. respectively.

Up to the last returns of the Registrar-General, phthisis headed the list of deaths, but in this year gastro-enteritis leads by about 40. The high death-rate obtaining respecting infants under one year drops rapidly until the age group showing the lowest mortality is reached, viz., children of from 10 to 15 years of age, of whom 2 per thousand die annually. The time of greatest mortality amongst infants is early summer. The exact numbers of infants dying of gastro-enteritis for the past five years is as follows:—1898, 340; 1899, 341; 1900, 357; 1901, 420; 1902, 489; so the deaths from this disease, which is in every case caused by improper feeding, is noticed to be rapidly increasing. The infant mortality rate for all children under the age of one year being 10·25 per cent., what must be the mortality in bottle-fed children alone? To you who, like myself, are in the habit of seeing and prescribing for artificially-fed babies, this question must be answered in one word, "enormous." All our experience shows that artificial food for babies in nine cases out of ten is most unsatisfactory in its results, and the consequence is that of every hundred bottle-fed babies at least 75 die before reaching the age of one year.

I think you will agree with me that this rate of mortality is put at not too high a figure. In Berlin, 30 artificially-fed babies die to one breast fed. All deaths indirectly due to gastro-enteritis are not certified to as being that disease; for instance, dentition (44 for year 1902), convulsions (174), diarrhœa, want of breast milk (35), thrush, and other diseases are mentioned as the cause of death, whereas the prime cause, of which these diseases are the effect, is gastro-enteritis, so that we may conclude that the deaths from gastro-enteritis are more numerous by a long way than is set down in the returns of the Registrar-General. Serious as this matter is from a physician's point of view, it is quite as serious from the point of view of the State. From the statistical returns, at least 2500 infants have been lost to the State during the last five years owing to, what might be termed, a preventable disease. If we can, as a State, preserve three-fourths of those deaths, it would be a great asset to the country, and if some of the money spent on immigration was spent in equipping properly constituted laboratories for the supply of adapted milk, I believe there would be a great decrease in the infant mortality in Brisbane and other large centres of population.

To emphasise the fact that it is next to impossible to obtain sterile milk suitable for infant feeding, let me quote from a leading article in the *British Medical Journal*, December 5, 1903:—"Facts which have been brought to light by the inquiry so ably conducted by Dr. Pierce, Medical Officer of Health for Woking, into the serious and extensive outbreak of fever and sore throat due to pyogenic infection traced to suppurative mammitis in four cows. We would appeal to the series of articles published this spring for proof that milk from healthy cows may be, and very commonly is, so carelessly drawn by milkers, so carelessly handled by farmers and railway officials, and, too often, so badly, if not fraudulently, manipulated by dealers that, by the time it reaches the consuming baby it is, to use Professor Thorpe's phrase, putrescent."

If this sort of thing can exist in England, where all sorts of safeguards are employed, what state of things must exist in these States? And, as an adult has various kinds of foods to depend upon, the absolute purity of the milk does not affect him very much, yet the baby has but the one food and that is milk, and if the milk be not sterile, disaster almost always follows, and naturally so. It is to be expected, and it comes.

Fatal gastro-enteritis in babies means improper feeding, and I must confess that when a child is brought to me suffering from vomiting, diarrhœa, and wasting, and to my question the reply is, "bottle fed," a feeling of helplessness and hopelessness comes over me as to the treatment to be adopted.

Having troubled you with a lot of dry statistics, which were necessary for the development of this paper, let me shortly go into the question of infants' food. The ingredients of the food necessary for an infant's first year of life is all supplied from the maternal source, and lucky is the infant who has not to depend on extraneous supplies. Mother's milk roughly consists of: fat, 4 per cent.; sugar, 7 per cent.; proteids, 1·5 per cent. Cow's milk contains: fat, 4 per cent.; sugar, 4 per cent.; proteids, 4 per cent. It is easy to increase the sugar, but in this country it is most difficult to diminish the proteids and at the same time to keep up the fats to the standard. The difficulty is usually overcome by the addition of cream. Cream taken off good milk as it stands (not separated cream) contains: fat, 16 per cent.; proteids, 3·2 per cent.; sugar, 3·2 per cent.; so that it is easy enough to prescribe the exact proportions to imitate mother's milk, as you are all perfectly aware of; but in Brisbane, when you write your prescriptions for the child's mother of the exact ingredients of which she is to make the infant's adapted milk, she almost invariably puts to you a poser in the shape of a question, "Where shall I buy the cream?" Cream of a definite strength is almost impossible to be procured here; of cow's milk one may also say the same. If we are going to try some of the artificial foods, let us first glance for a moment at the composition of the more important of them, bearing in mind that the composition of mother's milk is: fat, 4 per cent.; sugar, 7 per cent.; proteids, 1·5 per cent., and that the proteids in each of the artificial foods are chiefly vegetable and not animal.

Condensed milk diluted six times: Fat, 1 per cent.; proteids, 1·20 per cent.; sugar, 7·2 per cent. Mellin's food: Fat, ·04 per cent.; proteids, 1·50 per cent.; sugar, 11·5 per cent. Malted milk: Fat, 0·4 per cent.; proteids, 2·3 per cent.; sugar, 10·2 per cent. Nestle's food: Fat, ·75 per cent.; proteids, 1·5 per cent.; sugar, 6·38 per cent. Carnrick's food: Fat, 1·12 per cent.; proteids, 1·3 per cent.; sugar, 4·1 per cent.

In all those foods it will be noticed the large proportion of carbohydrates in the form of sugar, and the absence of fats, and in many of them is a large percentage of unchanged starch. All those foods have their place in infant feeding, but the absence of fat and other considerations render their use undesirable for any lengthened period.

There is no doubt that many children are reared and look well on any of the foods, or even equal parts of milk and water, but these are infants of great physique and digestive power; and sometimes when one is engaged in imploring a mother to nurse her child, one is met with the answer, "Why, I have seen a lot of children reared on the bottle." But those people see the children who live, and we see, unfortunately, too many times the children who die.

You are all aware of the great difficulty, which I have pointed out, of obtaining good 16 per cent. cream, or even good milk. But, even if we do succeed in getting the cream and milk, and of making the food in the exact proportion of mother's milk, we are face to face with another difficulty. How are we going to sterilise the mixture? The milk as it comes from the mother's breast into the mouth of the infant is perfectly fresh, sweet and free from germs and all putrefactive changes. How different to this state of things is the milk used in artificial feeding. In hot weather chemical changes take place almost immediately after the milk is placed in the pail; the hands of the milker, as a rule, are full of germs of all kinds, the pail is not free from bacteria, the milk has probably stood for hours before it reaches the house of the consumer, and the average woman knows little or nothing of the care required to free the food from all putrefactive germs before proceeding to feed her infant. The fact that gastro-enteritis is much more prevalent in the summer months suggests that it is in the hot weather that putrefactive changes are most likely to occur in the milk, and that infants are swallowing food, if you like to call it so, but, as well, all kinds of germs, the products of decomposition; or, to put in popular language, writ in large letters, "DIRT."

In feeding an infant other things have to be taken into consideration besides the adaptation or preparation of the milk. The social conditions, the financial and the mental capacity of the mother must be considered. I have patients who are too poor, or have not the time, to procure good cream. I have patients who will not take the trouble to constantly manipulate the milk in proper proportions; they will do it for a week, but they afterwards drop back into the old ways; and I have patients who are too ignorant to appreciate the difficulties of infant feeding, but want simply a bottle of medicine to cure their babies of all their troubles, and who could not, if they would, properly prepare an infant's food. The children of the poor and ignorant must be fed, and it is our business to point out how it is best to be done. To fulfil the conditions necessary for feeding an infant we must acknowledge some definite propositions.

1. That there is no substitute for mother's milk except properly adapted animal milk. 2. That the cream and milk must be of definite strength before adaptation. 3. That the ingredients used in preparation of the food, viz., the milk, cream, the carbo-hydrates and the water should be absolutely sterile and free from germs when consumed; and 4. That the physician should be able to increase or reduce the percentage of fats, sugars and proteids as he finds it necessary in the treatment of the infant

Now, to see how all this is to be accomplished, let us just consider what is being done in other countries.

In New York and several other American cities are established laboratories under municipal control. which dispense modified or adapted milk of any desired proportions on the prescription of a physician. In those laboratories all cream and milk is tested as to its strength and purity before it is used, the water and everything used in the making is bacteriologically pure, and then is handed to the customer an article perfectly sterile. Dr. Kerley, physician to the Babies' Hospital in New York, told me that before this system was introduced the mortality from gastro-enteritis in that city was appalling, in spite of stomach washings, drugs, artificial foods, and all the sources of our art; but that since there is a large drop in the death-rate, though of course many people are too careless, ignorant, or lazy to avail themselves of the use of the institutions.

In Battersea, in London, I am glad to know they are adopting the same principles, and go one better than they do in New York. Here the mortality has fallen since the establishment of a municipal milk depôt from 170 to 96 per thousand, and the figure is still decreasing.

The system they adopt in Battersea is copied from France, where babies are scarce and, naturally, highly prized, and the improvement over the New York system is that the sterile meal is put up in a sterile bottle, stoppered, and is just sufficient for one meal and for one meal only. The food is sold to the customer in baskets, each basket containing as many bottles as the child has meals in a day. The bottles contain different quantities and different strengths according to the age of the child or the prescription of the physician. Each bottle is supplied with a teat, and the use of any other bottle is forbidden as well as the rewarming of the milk if it is not all consumed after the bottle is once opened.

Here is a system, which is well nigh perfect. If we could only impress on our people or our Governments that there is milk which feeds and that there is milk that kills, a way out of our difficulties in infant feeding would be soon found. The laws, which provide against food adulteration, jams, pickles, and so on are very necessary, but they are the laws made for the preservation of the health of the adult. Where is there a law made or where is the effort made to preserve not the health but the life of the helpless baby? The whole question is a serious one for the State. It is almost as much a State question as a medical question, and it is our duty, as medical men and medical women, to point out to the Government how infant lives can be saved. Infant life in the States is a valuable asset to the Commonwealth. If the Government would establish laboratories in Brisbane and in large centres of population on the lines of the one in Battersea the expense would not be much, and the saving in infant life would be very great. If we are to go on in the same old way as we have been doing, I feel the deaths from gastro-enteritis will mount up enormously as our population increases. There is but one way to fight the injurious milk—to establish an institution where the poor and the well-off where the ignorant and the educated, all alike can have the infants' food prepared, can buy it, and we shall be able to feel that babies are fed and not poisoned, and that hundreds of lives are being saved year by year.

Let us remember that, for the successful feeding of infants, there are three conditions absolutely essential. 1. The food should correspond to the constituents of human milk, and in the proportion of proteids, carbo-hydrates and fats suitable to the age of the child and to its digestive capabilities. 2. The food should be absolutely sterile. 3. The bottles and teats should be sterile. Until this, which is the foundation of all treatment, be properly established, our attempts at saving infant life will be almost futile, unless in those exceptional children who have great vigour and unusual digestive capacity. The only way I can see out of the difficulty is the establishment of institutions which might easily be made self-supporting, where those three essentials shall be carried out in their entirety. With such institutions many lives will be saved to the State; without it we shall go on in the same heart-breaking way, seeing infant mortality mounting up year by year as population increases.

(Read before the Queensland Branch of the British Medical Association.)

INDICANURIA.

By George E. Rennie, M.D., M.R.C.P. (Lond.), Tutor in Medicine, University of Sydney, Assistant Physician Royal Prince Alfred Hospital, Sydney.

My attention was first seriously directed to the subject of indicanuria on reading an article in the *American Journal of Insanity*, by Isidor Coriat, in which the writer stated that the amount of indican in the urine varied in different mental states. It became much increased in amount when there was marked mental depression, and diminished in amount as the melancholia passed off. This seemed to me an important fact in the chemical pathology of insanity, as supporting the hypothesis that melancholia and mental depression are due to the influence of some poisonous toxin on the brain. Since then I have examined the urine in a large number of cases for the presence of indican, and find it a very variable constituent of the urine; at any rate, in quantities large enough to be recognised by the ordinary clinical tests.

Test.—The method I have followed for testing for this substance is Jaffe's. To a small quantity of urine in a test tube an equal volume of strong hydrochloric acid is added; then two or three drops of a dilute solution of chlorinated lime are added, and then a few drops of chloroform, and the whole skaken up. After a short time the chloroform settles down to the bottom of the tube, and is coloured varying shades of blue in proportion to the amount of indican contained in the specimen of urine. Strauss has adopted a new clinical method for the quantitative determination of indican in the urine, and finds that the quantity measured in milligrams varies from 2 to 4 mg. in a normal person, up to 60 mg. in urine rich in indican. These are the amounts for the 24 hours.

Chemical Sources of Indican.—Indican is not one of the pigments of the urine, and is not derived from chemical decomposition of the blood or bile pigments. It is derived from indol, which, with skatol, occurs normally in the intestine. It is a product of putrefaction of albuminous substances in the intestine, and arises during the process of pancreatic digestion, under the influence of bacteria. It is also formed during the growth of some micro-organisms in nutrient media, and appears also to be formed in foci of inflammation in the body, which have become putrid. Whether the indol be formed in the intestine or in another part of the body, it is absorbed into the blood, where it becomes oxidised to indoxyl; this immediately combines with potassium sulphate to form indoxyl-potassium sulphate, in which form it is excreted in the urine. In the test employed, this indoxyl-potassium sulphate is decomposed by the hydrochloric acid, and oxidised by the chlorinated lime, the product being indigo blue, which is dissolved out by the chloroform, and potassium hydrate sulphate remains in solution. In very rare cases the indoxyl is oxidised in the body, and is excreted in the urine, as indigo blue. Such a case was reported last year in the *British Medical Journal* by Macphedran and Goldie. The patient was a man aged 24 years, who presented no other recognisable sign of disease.

Pathological Relations of Indicanuria.—In view of the fact that indol is formed naturally in the intestine in the process of pancreatic digestion, it should be always present in the urine, more or less, and it is a matter of interest to examine the conditions under which the indican in the urine is diminished or increased in amount. (I leave out of consideration at present those cases in which there is a putrid inflammation or abscess.) The first point worthy of notice is this: If the amount of indol formed in the intestine depend upon the amount of putrefaction going on in the intestine under the influence of micro-organisms, then an increase in the amount of putrefaction in the intestine should, *pro tanto*, cause an increase in the amount of indican in the urine. So it is stated that the largest quantities excreted in health are observed after a liberal ingestion of a meat diet, particularly the so-called red meats; while the smallest quantities have been found during the ingestion of a milk diet. If a large amount of albuminous material is passed from the stomach into the intestine in an imperfectly prepared condition, then we should expect the amount of intestinal putrefaction to be increased, and a corresponding increase in the amount of indican in the urine.

The next point is that, other things being equal, we might, *a priori*, expect that the amount of indican in the urine would be an index of the degree of functional activity of the pancreas. A short review of the work done in this direction shows that the amount of indicanuria apparently does not bear any relation to the condition of functional activity of this organ. Gerhardi, in the year 1886, made the diagnosis of disease of the pancreas as the cause of the mechanical disturbance of the intestine on account of lack of increase of indican in a case of obstruction of the small intestine. There were several symptoms which indicated an obstruction in the uppermost part of the intestine; but as there was no abnormal increase in the indican in the urine, and especially as there was no peritonitis, a loss of function of the pancreas or a disease of that gland was suspected. The autopsy confirmed this assumption of Gerhardi's. This view appeared to be supported by experiments on animals. Pisenti estimated the amount of indican in the urine of dogs before and after tying the pancreatic duct. He found in one case, before the operation, 11·7 to 19·9 mg. of indican per diem; after the operation, 4·3 mg. per diem. Other experiments gave the same relative decrease in the amount of indican. After the administration of pancreas peptone to dogs, the pancreatic duct of which had been tied, there was an increase of the indicanuria. Some clinical observations support the assumption of Gerhardi, while others refute it. Stefanini, in a case of purulent pancreatitis, and Biondi, in a case of adenoma of the pancreas, observed a lack of indicanuria. On the other hand, Schlagenhaufer asserts directly the increase of the indican in a case of syphilitic pancreatitis. The results obtained by Katz, who worked at the subject on the advice of Professor Oser, of Vienna, are in direct opposition to the statements of Pisenti. He showed that there was absolutely no diminution in the amount of indican after lesions of the pancreas. In many cases a marked indicanuria could be proved. The amount of indican was greater, and its increase could be shown distinctly in the days following the operation, especially in those cases in which the animals took no nourishment after the operations, and even when they died quickly from duodenal necrosis. There was no diminution in the excretion of indican, also in the animals which long survived the operation. De Renzi also could show no change in the amount of indican in the urine in his experiments on animals, even after total extirpation of the pancreas. Professor Oser remarks that "From these observations it is evident that the presence or absence of a disease of the pancreas is not to be concluded from the amount of indican in the urine; the variations in the excretion of the indican may be founded on factors which have no direct relation to the activities of the pancreas."

The third point is that although indol may be formed in the intestine in large amounts, yet the degree of indicanuria must depend upon the amount of absorption of the intestinal mucous membrane. In cases of simple constipation, particularly if there be also much intestinal putrefaction, the indol, instead of being rapidly excreted in the fæces, is absorbed from the intestine into the blood, and excreted in the urine. But even if diarrhœa be present along with intestinal putrefaction, there will be an increase in the amount of indican in the urine. And here we get an insight into the processes of absorption by the intestinal mucous membrane in the small and large intestine. In disease of the small intestine, associated with intestinal putrefaction, there is an increase of the indican; but in chronic disease of the colon, such as mucous colitis, dysenteric ulceration, and even simple chronic ulceration, with diarrhœa, there is an absence of indicanuria. Hoppe-Seyler has noted the following as conditions in which there is an increase in the proportion of ethereal sulphate in the urine—that is, an increase in the amount of indicanuria:—(1) "Deficient absorption of the normal products of digestion, such as occurs in peritonitis and tubercular diseases of the intestines, leads to an increase in the amount of indican, because the products of digestion undergo putrefactive changes, and the putrefactive products are absorbed. (2) Diseases of the stomach, in which the food lies in the stomach a long time and undergoes fermentative changes, always leads to an increase of the indican. (3) Simple constipation and typhoid fever do not produce this result. (4) Putrefactive processes outside the alimentary canal, putrid abscesses, putrid peritonitis, etc., have the same result as putrefactive processes within the intestines. The amount of the ethereal sulphates is, moreover, in all cases proportional to the degree of the putrefaction, and is increased by the retention and diminished by the discharge of putrid matter."

Clinical Significance of Indicanuria.—Although here we are more concerned with the strictly pathological aspect of this question, it may not be altogether out of place to refer to some points in the clinical significance of indicanuria. As far as my own experience goes, I have certainly failed to find indicanuria definitely associated with conditions of mental depression and melancholia. I may say that I have never found any increase in any case of this nature, although I have been carefully on the watch for this for some two or three years past. In diseases of the stomach, such as flatulent dyspepsia, with atony of the stomach, and with foul breath and furred tongue, an increase in the amount of indican is pretty general. I have not found any increase in cases of so-called "sluggish liver," with scanty high-coloured urine and copious deposit of urates. In diseases of the pancreas, my experience is confined to the examination of one case only, which was proved by operation to be a case of chronic pancreatitis, and here there was persistent absence of indicanuria. As regards intestinal disease, my experience entirely confirms that of others already mentioned. In several cases of disease of the large intestine, such as mucous colitis, dysenteric and simple ulceration, the absence of any marked indicanuria was noteworthy, although the fæces were such as one would expect to find associated with a severe degree of indicanuria. I think this is a point of interest in diagnosis. As regards other intestinal conditions, I have found at times a marked increase in cases in which there was nothing to suggest any intestinal disease, and in which the bowels were acting freely each day. It appears that indicanuria is markedly increased by any condition which prevents the passage of the fæces through the small intestine, and this might be of assistance in the diagnosis of the site of the obstruction in case of intussusception, volvulus, new growths, etc., causing intestinal obstruction. In my opinion some assistance is to be gained clinically from a careful investigation of this condition, although several observers state that the matter is one of comparatively no importance.

(Read before the Pathological Club of Sydney.)

THE VALUE OF ANTI-STREPTOCOCCUS SERUM IN THE TREATMENT OF SEVERE PUERPERAL SEPTICÆMIA.

By Richard Jones, L.R.C.S., L.R.C.P. (Irel.), formerly Medical Inspector of Lepers to the Government in Hawaii, Hon. Physician to the Bendigo Hospital, Victoria.

MRS. F., aged 31, a multipara, was confined 30 miles away by a midwife, on October 19th, 1901. The following day the patient complained of headache, with flushes and frequent chills, together with pains throughout the body. The condition was put down to "milk fever." Her illness speedily increasing, I was sent for on October 22nd, or on the third day after delivery. On my arrival, at 6 p.m., I was struck by the appearance of the patient, and at once ascertained that frequent digital examinations had been made during labour. One could see at once what was wrong. She had fever, but not "milk fever." She was restless, and muttering to herself, having a pulse of 110, a temperature of 104·6°, and respiration 22. All the muscles in her body were twitching, more especially the facial.

The urine was scanty and high coloured. The lochia scanty, but in no way offensive. Thirst was great. There had been two copious, watery, dark and most offensive motions. Insomnia was complete. The tongue was covered with a thick yellow fur. There was no milk in the breasts. There was general abdominal distension, tympanitic throughout. The area over the uterus and that to its right was somewhat tender to the touch. Per vaginam, the roof to the right of the cervix was somewhat thickened and tender to the touch, but there was nothing else to note. The poison having already passed the uterus, and become general, and of a very severe type, I purposely withheld a treatment which, under different circumstances, I would have at once adopted—I mean curettage. I therefore relied upon continuous uterine irrigation with sol. acid carbol. 1-500, so highly recommended by Pozzi, in preference to intermittent irrigation with sol. hyd. perchlor., and by so doing avoid the risk of a further change of infection through vessels opened up by curettage. I prescribed calomel gr. 3, with opium gr. 1½, and quinine sulph. 20 gr., and I put a trained nurse in charge.

23rd October. — Morning temperature, 102·2°; evening temperature, 105°. Seven profuse watery motions.

24th October.—Morning temperature, 103°; evening temperature, 100·8°. Increasing abdominal distension, per vaginam as before; diarrhœa continuing. General condition worse.

25th October. — Morning temperature, 102·8°; evening temperature, 108°; pulse, 170; respiration had increased from 22 to 36. Five profuse watery motions; wild delirium; several rigors.

26th October. — Morning temperature, 103·2°. Patches of pneumonia at base of both lungs; abdominal distension increasing; starch and opium injections used to keep diarrhœa under reasonable control; motions and urine passed involuntarily. All treatment appearing useless, and it being plain the patient could not last many days, I decided to give anti-streptococcic serum (Pasteur Institute), and gave the first injection of 10 c.cm. Evening temperature, 105·6°; pulse, 150; respiration, 42. There was fair sleep; the skin became moist, and there was a general calming down of the patient. Seven profuse watery motions.

27th October.—Morning temperature, 104·4°; pulse, 140; urine and six profuse watery motions passed involuntarily as before. Herpes upon the lips. Patient unaware of her surroundings. Tongue brown and cracked; gums bleeding, and covered throughout their whole extent with sordes. The lips were also cracked and bleeding, and the heart was failing fast. 10 c.cm. anti-strep. serum injected. Evening temperature, 103·6°; pulse, 118.

28th October.—Morning temperature, 104·2°; pulse, 130. Night temperature, 105·6°; pulse, 145. Urine and seven profuse watery motions passed involuntarily. Abdominal distension increasing. Had fair sleep; skin moist; condition generally worse.

29th October.—All day temperature stood at 104·4°; pulse, 150; respiration, 42. Every joint in the body swollen, even the fingers; abdominal distension increasing; no sign of dulness; vaginal examination, suggestion of pus high up, but no sense of fluctuation whatever. Four watery motions, not so watery or copious as before, but passed involuntarily. Gave a mixture of tr. cinchon co. and am. carb. in full doses every four hours, and gr. 1-60 strych. hypodermically every four hours, as patient was going from bad to worse.

30th October.—Profuse sweat. Morning temperature, 103·6°; pulse, 140. Evening temperature, 104°; pulse, 160; respirations, 42. Lungs unchanged. Seven motions passed involuntarily.

31st October.—Morning temperature, 102·4°; pulse, 150. 10 c.cm. anti-streptococcic serum injected. Evening temperature, 104·6°; pulse, 146; respirations, 60. Three watery involuntary motions. Condition of patient shockingly bad; expected to pass away at any moment. Hypodermics of ether and strychnine relied upon.

1st November.—10 c.cm. anti-streptococcic serum injected. Morning temperature, 103·4°; evening temperature, 105·6°; pulse, 160; respiration, 46. Profuse sweat; one motion, involuntary; abdomen and vagina the same.

2nd November.—Indications of abdominal distension going down; the baggy feeling to the right of cervix more suspicious of suppuration higher up, but no bulging whatever. Emaciation and exhaustion very extreme, Great care taken against bedsores. Morning temperature, 102·8°; evening, 103·8°; pulse, 140 and 160; respiration, 54. Two voluntary motions.

3rd November.—Morning and evening temperatures, 103·4°; pulse, 140; respirations, 56. 10 c.cm. serum injected. No motions.

4th November.—Morning temperature, 101·4°; pulse, 130; respiration, 46. Evening temperature, 103·2°. Abdominal distension falling; tongue improving. One motion, improved. 10 c.cm. serum injected. Fair sleep; moist skin, and general calming down, which followed each previous injection.

5th November.—Morning temperature, 102·4°; pulse, 117. Night temperature, 104·4°; pulse, 126; respiration, 56. Abdominal distension falling well; swelling in joints going down; general state improved. No further trouble with motions. Injection of starch and opium withheld. 10 c.cm. serum injected.

6th November.—Morning temperature, 101·2°; pulse, 130; respiration, 50. Evening temperature, 104·4°; pulse, 150; respiration, 48. Abdominal distension falling well, especially on left side, showing up dullness on the right side, evidently leading from uterus to kidney. Vaginal information no more than before. Patient holding her own. One motion, under control.

7th November.—Temperature and pulse, all day, 103·2° and 160. Certain signs of improvement.

8th November.—10 c.cm. serum injection. Profuse sweat. Morning temperature, 102°; pulse, 130. Evening temperature, 103°; pulse, 150.

9th November.—Morning temperature, 98·6°; pulse, 140; respirations, 60. Abdominal distension gone down well, showing up a huge abscess of extent previously suspected. Bimanual examination gave distinct fluctuation through abdomen, but not through vagina.

10th November.—Morning temperature, 99·4°; pulse, 150; evening temperature, 101·2°; pulse, 126.

11th November.—Morning temperature, 102·8°; pulse, 130; respiration, 46. Evening temperature, 102·2; pulse, 130. The last injection of 10 c.cm. serum injected.

12th November.—Morning temperature, 103·2°; evening temperature, 103·6°. From this, gradual improvement was made, temperature not getting above 102°; pulse from 130 to 115. Hair falling out.

25th November.—Patient had by this time gained sufficient strength to be removed upon her own bed by train to private hospital. There was a large bedsore over sacrum and neck, whilst other parts were saved with difficulty.

28th November.—Under ether I opened abdomen and removed an enormous quantity of pus from a cavity, exposing the uterus and kidney. Patient all but died on the operating table, Temperature ran an irregular course until January 18th, 1902, on which date pulse, temperature and respiration became normal after three months. Throughout, the mixture and hypodermic injections were continued every four hours alternately, with a liberal supply of champagne, and she took large quantities of the best nourishment. In all, she had nine injections of serum, 90 c.cm. (Pasteur Institute). I have seen the patient twice towards the end of the year, and again quite recently, and she expressed herself as never having been so well in her life.

There were no cultivations made, but there can be little doubt that the case was one due to streptococcus pyogenes, producing streptomycosis, hence the good results produced by the anti-strep. serum. It must, of course, be admitted that puerperal infection may be independent of streptococci, but the conjunction of certain symptoms—rigors, high temperature, very rapid pulse and breathing, sweats, and very rapid bodily waste—points, beyond all doubt, to streptococcus infection.

The Association for the Prevention and Cure of Tuberculosis, recently formed in Melbourne, has issued a number of pamphlets dealing with the infectious character of the disease and the present methods of treating it. The association claims that with a little more knowledge, and with the exercise of care, it would be quite possible to stamp out consumption altogether. The pamphlets estimate the number of consumptives in Victoria at 5000. Of these, 1800 are totally unable to support themselves. The Government Home for Curable Consumptives, with its headquarters at Macedon in summer and Echuca in winter, provides for 40 patients; the Sale and the Amherst hospitals between them maintain 25 at the Government expense; and the Austin Hospital, at Heidelberg, has at present accommodation for 42. This gives a total provision for 107, and it is expected that the number of consumptives who can be brought under such treatment will be raised to 300 by the Kronheimer ward and the accommodation to be provided at the quarantine station.

Dr. J. S. Billings, of the New York Health Department, reports that the establishment of the open-air hospital on North Brother Island in May last for the treatment of tuberculosis had resulted in complete success. Six months ago 127 patients entered the institution. Eighty-four of them have been discharged as cured. Only the worst cases were admitted to the institution.

LITHOTRITY AND THE BOTTINI OPERATION AT THE ONE SITTING.

By H. C. Hinder, M.B., Ch.M., Hon. Surgeon Prince Alfred Hospital, Sydney.

The Bottini operation aims at making a low level channel through the prostate with a platinum blade which is enclosed in a water jacket. The blade is heated by means of a battery which is capable of developing a current of 50 ampères. Its advantages the following cases will make sufficiently obvious. Its disadvantages are more imaginary than real, more theoretical than practical. The Bottini operation is eminently adapted for patients whose prostates are small, and also for those whose general condition makes it evident that they are unfitted to stand the severe handling which is necessary in order to relieve them by means of prostatectomy.

1*st Case*.—This man had a stone crushed two years ago by me, and six months before that by another surgeon. After completing the litholopaxy, I examined with the cystoscope, and saw that the bladder was clear; in fact, this was done in each case before proceeding with the Bottini. The patient had a small prostate, with three ounces of residual urine, which was very dirty and alkaline. After his bladder had been washed out for three days, and he had also rested, the stone, as large as a pigeon's egg, was crushed and washed out, and the prostate incised with several median and oblique cuts, so as to make a good channel. There was very little bleeding, no rise of temperature, and, with daily washing out, he left the hospital quite well. He was operated on ten months ago, and when I saw him three weeks ago he had no residual urine, there was no frequency, and, in fact, he was in excellent urinary health.

2*nd Case*.—A patient of 42 years had a small stone, about two-thirds the size of a pigeon's egg, and a small median enlargement of the prostate. His urine was fairly clear. He was troubled with some prostatic congestion and irritability, partly due to the stone and partly due to the prostate and residual urine, which amounted to nearly two ounces. He was operated upon 12 months ago. The next day he was able to read the newspaper. I saw him a month ago, and he had absolutely no urinary symptoms. Each of these men stated that they merely felt a little stinging pain at the neck of the bladder for a few days after operation.

3*rd Case*.—This patient was 61 years of age. He had a stone crushed some months before, and his symptoms dated back for two and a half years. The stone does not seem to have been completely removed, for he passed some broken bits and blood for some weeks after the operation. He suffered from occasional severe attacks of renal colic, and during the time he was being prepared for operation he once had a temperature of 100°. His urine was foul, and his bladder contained two small stones. There was marked chronic cystitis, and phosphatic deposits could be seen stuck to the bladder-wall. There was slight tenderness over both kidneys, the left being worse than the right. The man looked thin and grey and ill. He walked doubled up, and passed his urine every 20 minutes. At the end of four days he had improved. His prostate was moderately enlarged as felt per rectum, and also on cystoscopic examination, and there were two and a half ounces of residual urine. Litholopaxy and Bottini's operation were performed. Three hours after he had a considerable amount of pain, which subsided after some small clots had been washed out. His temperature was as high as 102° for the first few days, and his kidneys were tender—in fact, as nearly as I was able to make out, this man had pyelitis before operation, as pus in small quantities came from the ureter. I never saw temperature on the third day or later after Bottini, and I never saw it over 100° before. I heard from this man a month ago, and he was fat and well, and had no residual urine. After going home, he had one or two slight attacks and some pus in his urine; but he has had a clear run of 12 months' good urinary health, so I think it is fair to presume that he is probably well.

4*th Case*.—This man was a little old fellow, about 80, but I am not certain as to his precise age, nor was he either. He had 12 ounces of residual urine, and a stone very little larger than a pigeon's egg. I confess that I operated with the Bottini too quickly, and to this I must attribute the bleeding which followed. He was operated upon in Prince Alfred Hospital, and I was summoned to see him the same night. He had a full bladder, and was in pain. A catheter had been passed and had drawn off a little clotted blood, so that it was presumed that his bladder was full of it. Inasmuch as I was compelled to make him absolutely snug, or stay the night with him, I opened suprapubically, and found that there was a clot only the size of a goose's egg, and that all the rest was clear urine. The clot was cleared out, and a perineal drain inserted. His convalescence was tardy, but when I saw him a short time ago he was jolly and well, and had half an ounce of residual. This man bled more than any other case of Bottini I have had, and he is the only one out of 16 cases whose condition demanded further interference.

The advantages of the combined operation are obvious. Bottini is indicated in all cases where the prostate is small, where the patient is very old, or where the general condition is such that one feels that a prolonged or severe operation would be attended with a greater amount of shock than the patient is able to bear.

I have operated on two other similar cases within the last four months and with good results, but the cases are too recent to be worth fully recording. I do not for one moment think that Bottini can supplant the complete removal, but at times it is not judicious to recommend complete removal; that is to say, one feels that the patient's life is less endangered and his comfort less interfered with by adopting the Bottini method.

THE TREATMENT OF HÆMOPTYSIS.

By Francis Hare, M.D., Consulting Physician, Brisbane General Hospital, Visiting Physician Diamantina Hospital for Chronic Diseases, Brisbane.

In the last of a series of papers on the mechanism of the paroxysmal neuroses, published in the *Australasian Medical Gazette* for October, 1903, I referred incidentally to the treatment of hæmoptysis by inhalation of amyl nitrite—a method of treatment deduced from the physiological principles of the circulation, systemic and pulmonary. Two illustrative cases were given. In the first, hæmoptysis occurred in a man suffering from mitral insufficiency, and was proximately due to cutaneous vaso-constriction from chill. The administration of one capsule of amyl nitrite by Dr. C. S. Hawkes terminated the bleeding instantaneously. In the second, two attacks of hæmoptysis occurred on the same day in a phthisical subject, and in both the bleeding was instantaneously stopped by the same drug. Subsequently the two following cases have occurred:—

Phthisical patient, aged 34, in Diamantina Hospital: excavation upper part of both lungs. Had had 12 attacks of hæmoptysis in nine years. Each attack had begun insidiously, and steadily increased in severity. On no occasion had he ever had a slight attack of hæmoptysis which had passed off or been overcome without laying him up for 10 days or a fortnight. Most of his attacks had constituted serious intercurrent illnesses, which had left him conspicuously worse than at their onset, and from which he did not fully recover for some weeks. On January 16th, he began to cough up a little pure blood. He was ordered to bed, and a five-minim capsule of the nitrite administered. The hæmoptysis ceased instantaneously, although streaks of blood continued to permeate his sputa for about 10 days.

Phthisical patient in the Jubilee Sanatorium, Dalby: cavity in right apex. On December 6th, 1903, hæmoptysis commenced. Over five ounces of blood had been lost when one capsule of amyl nitrite was administered. The hæmorrhage ceased instantaneously and completely. On January 30th, there had been no recurrence. Dr. Andrew Stewart, the visiting physician of the sanatorium, who reports this case, points out that there was no subsequent local congestion, nor any rise of temperature such as usually occurs after hæmoptysis as severe as in this instance.

Thus the first five attacks of hæmoptysis treated by amyl nitrite inhalation have all been instantaneously stopped; there has not been hitherto even a comparative failure.

Manifestly in phthisical hæmoptysis there is in operation one of the most highly vicious circles in pathology—a circle which is largely responsible for the profuseness and continuance of the hæmorrhage. The intra-pulmonary irritation of the effused blood causes cough; each act of coughing, like any other sudden exertion, raises the blood-pressure; each rise of blood-pressure is apt to induce fresh hæmorrhage, and so on, the circle continuing to revolve in many cases until the loss of blood has been sufficient to reduce the blood-pressure materially, and thus terminate the hæmorrhage. This natural cure of hæmoptysis was at one period in the history of medicine imitated by physicians who resorted to venesection in this emergency, a somewhat expensive but by no means irrational imitation. The treatment by amyl nitrite is another imitation, less complete than venesection, but much more economical. The vicious circle is broken through at the same point and by similar means, namely, reduction of the general blood-pressure; but the blood is saved instead of being lost; consequently the procedure may be repeated as often as is necessary.

The point at which the vicious circle is broken through is of the greatest importance. Too often, I am sure, I have yielded to the temptation to smother the cough by a hypodermic injection of morphia. The resulting cessation of cough tends undoubtedly to the cessation of hæmorrhage, but the blood already effused is retained, decomposes inevitably, and not rarely induces septic pneumonia, high temperature, and prolonged exhausting illness which may end fatally.

This is the history of so many cases which seemed under open-air treatment on the road to recovery that I had come to regard hæmoptysis as a grave misfortune; but if amyl nitrite proves efficient as a hæmostatic, the hæmoptysis of phthisis will be largely freed from its subsequent as well as its immediate dangers, for the action of the drug is a safeguard against retention. It is the influx of blood to the ulcerated lung tissue, not the efflux from the air passages, which is checked, and the uninterrupted continuance of cough assures the rapid evacuation of blood already effused. In none of the cases detailed was there, so far as could be ascertained, any retention of blood; in none of them certainly was there the least subsequent additional rise of temperature or other complication.

A CASE OF ULCERATIVE COLITIS AND "EMBEDDED PNEUMONIA": WITH REMARKS ON CELLS RESEMBLING AMŒBÆ COLI.

By J. Burton Cleland, M.D., Ch.M., late Residen Pathologist, Royal Prince Alfred Hospital, Sydney; Demonstrator in Pathology, Sydney University, 1902.

(*From the Pathological Department, University of Sydney.*)

The following case, for several reasons, appears interesting and worthy of note. Its pathological import will be discussed after the clinical notes and post-mortem examination have been detailed. At present, attention may be called to the errors that may lie in inaccurate observation, or in ignoring for the sake of one theory the points in favour of another. The presence of any severe form of dysentery or colitis suggests, amongst other matters, an enquiry into the presence or absence of amœbæ coli. If abscesses of the liver complicate the condition, they should be certainly sought after. An amœbic consolidation of the lungs sometimes occurs by direct extension through the diaphragm, from such a liver abscess. Now, in this case, there was no liver abscess, but a most unusual form of pneumonic consolidation was present—it might be termed a "buried pneumonia" or "embedded pneumonia," since the consolidation, though of the lobar type in some ways, formed distinct masses in both lungs, surrounded by healthy crepitant tissue. The central portions of these masses were of a thickish, gelatinous consistence—a condition present in the areas of lung affected by direct extension of amœbic abscesses. The theory suggested itself that these masses were due to the presence of amœbæ which had reached their position in the lungs, not by direct extension but by way of the vessels or lymphatics. Such a condition had not previously been described, and, on making sections, we discovered a few very large, rounded cells containing a small nucleolus and a considerable amount of blackish pigment, embedded in the purely fibrinous contents of certain alveoli. We compared them with genuine stained amœbæ taken from a clot in the vena cava in a case of true amœbic abscess. The appearances were identical. We examined numerous sections of the ulcerated intestine, but could, however, find no similar bodies, though there were a number of irregular or spindle-shaped pigmented connective tissue cells. Our suspicions as to the genuineness of the amœbæ were still further roused by noticing the presence of these same rounded cells in certain alveoli in the mass which were filled not with fibrin but with catarrhal cells or leucocytes. On comparing the "amœboid" cells with certain cells found in the alveoli in genuine instances of catarrhal pneumonia, chronic venous congestion, etc., we found that they were almost identical, in such conditions similar large pigmented cells with small nuclei being found. Thus we saw that the "amœboid cells," though resembling so closely the true amœbæ yet resembled nearly as much certain catarrhal pigment-carrying cells found in other conditions. Finding no evidence of amœbæ in the intestine, and being able to show the presence of bacteria in the sections of of the lung, we were forced to relinquish our hypothesis in the plea of "not proven." The conditions found might still be due to the amœbæ coli, which might have disappeared from the intestinal tract during the course of the disease, as they often do, but we could not prove it.

J.M., labourer, age 51 years, married. Admitted to Prince Alfred Hospital, Sydney, under the care of Dr. Wilkinson, on October 22nd, 1902.

He had been ill two and a half days. The illness came on suddenly, with persistent diarrhœa and the passage of blood. This latter was bright red and varying in amount, and with it was a fair amount of mucus. No cause could be assigned for the condition; there had been no error of diet, and he gave no history of renal disease. He had been treated for syphilis for the last five years.

On examination, the patient was a haggard, anxious-looking old man. He seemed in pain and feeble. Temperature, 100°; pulse, 94; respiration, 24. He complained of colicky pain situated over the whole abdomen, and tenderness. There were also persistent diarrhœa and occasional hiccough. The pain in the rectum was owing to irritation from the diarrhœa. Anorexia was present, but no vomiting at this time. The abdominal walls moved slightly on respiration; the abdomen was not distended nor specially tender, and the tenderness was general, not localised. The percussion note was unaltered; no tumour was palpable, nor was the liver or spleen. The liver dulness was normal from the sixth space to the subcostal margin. The diarrhœa was persistent; the motions contained a fair amount of blood, some bright and some dark red; mucus was present in some quantity; there was no smell or other peculiar characteristic. *Per rectum* nothing abnormal was detected. Urine 1016, no albumin, no sugar. Heart apex beat not visible or palpable, audible in fifth space ¼-in. inside nipple line. Chest emphysematous. Pulse regular, of medium tension, walls not thickened. Cutaneous and nervous systems healthy. Sleep interrupted by diarrhœa and hiccoughing.

He gave a history of abscess in connection with the bladder, but of this there were no signs now.

23-10-02.—Condition worse. Diarrhœa and melæna persisting; hiccoughing almost constant, and very distressing; cannot sleep or rest; no abdominal pain.

25-10-02.—Worse. Diarrhœa and hiccoughing persist, and cannot be arrested.

27-10-02.—A better day and night. Bowels open less often—18 times; blood less; hiccoughing less, apparently from washing out of the stomach.

28-10-02.—Worse yesterday. Inhalations of "Henrods" have lapsed the hiccoughing. Temperature since admission up to 99·8° at times; heart sounds not heard in mitral area; pulse fairly good.

5-11-02.—Bowels open 12 times; no blood lately; no hiccoughing. Feels a little better; looks very grey and emaciated. Pulse weak.

8-11-02.—Much worse. Bowels open as frequently as ever; no blood, no mucus. Ipecacuanha has not caused vomiting, but there has been no improvement with it. Pulse very weak and soft.

13-11-02.—Condition worse every day. Diarrhœa as before. A fair amount of bright blood.

14-11-02.—Patient died.

The temperature for the first week was usually about normal in the morning, and up to 100°-102° at night; after that it gradually became subnormal. The bowels were open daily from 8 to 18 times.

All drugs and methods of treatment, such as Beta-naphthol, bismuth, catechu, opium, ipecacuanha, etc.; washing out the stomach and bowel with saline solution; enemata of starch and opium, etc., proved unsuccessful.

Post-mortem Examination.—Eight hours after death, 14-11-02. The body was very emaciated; rigor mortis was present, but not marked; p.m. congestion slight; the skin was of a peculiar dusky hue; the muscles were dry.

Lungs.—Both weighed 22 oz. Some easily broken down pleuritic adhesions on both sides. In the upper lobes of both lungs, embedded in healthy and crepitant lung tissue from which they were separated by a sharp boundary line, were on each side four or five masses, the largest (in the left lung) being about two inches in diameter. These masses were round in shape, and had the consistence, colour, and granular appearance of gray hepatisation. The centre of the largest was degenerating, and from it a thick, opaque, muco-pus exuded. On section were some small streaks of blackish pigmentation. The masses did not occupy the extreme apices of the lobes, and they were all separated from the surface by "healthy" lung tissue. The edges of the lobes were emphysematous. The middle lobe (right lung) contained two small similar masses the size of peas. The right lower lobe contained none. At the base of the left was one the size of a marble.

The *larynx* and *pharnyx* were healthy; *thyroid* small; the *heart* had some white clot in the right ventricle; the tricuspid orifice was dilated. The *liver* weighed 80 oz.; was enlarged; there was a scar at the junction of the two lobes; on section it presented a finely rough surface, and was darker and tougher than usual; there was no sign of abscess formation; the bile was thin and watery. The *spleen* weighed 6 oz.; was dark, and not very soft. The *kidneys* weighed 8 oz. (right) and 10 oz. (left); were rather large, very dark in colour; the cortex was a little wasted, the capsule non-adherent; on section, the surface somewhat granular. The *suprarenals* were a little increased in size. The *pancreas, prostate*, and *stomach* were healthy. There were no enlarged *glands* in the abdomen or thorax.

Intestines.—The mucous membrane of the large intestine, from just beyond the cæcum, was throughout black (the patient had had bismuth), necrotic looking, and swollen; in a number of places it had been shed, leaving the paler submucous tissues showing through; the thickness of the walls was increased, and they were œdematous. There was some congestion in the upper part of the small intestine; in its lower part were what had evidently been at one time superficial erosions—their site was indicated by a square, round, or irregular line of black pigmentation; there were some eight or ten of these, of sizes up to half an inch diameter.

The *brain* weighed 48 oz.; there were a number of small retention cysts in the choroid plexuses; otherwise it was quite normal.

Microscopical Examination.—The lungs.—In the affected areas, the alveoli are distended for the most part with leucocytes; but either singly or scattered in small clumps and surrounded by these alveoli packed with leucoytes, and others distended with fibrin and but very few leucocytes. Some may be seen in an intermediate stage between being filled with leucocytes and filled with fibrin, but often an alveolus filled with fibrin and a few leucocytes, and staining pink with eosin is neighbour to one which shows only the hæmatein-stained nuclei of leucocytes. Scattered occasionally in an alveolus filled either with fibrin or with leucocytes may be seen very large, quite round, or somewhat irregular cells staining very poorly, with a small, imperfectly staining nucleus and containing blackish pigment granules. These resemble "catarrhal cells." When one of these appears, as it frequently does, in a fibrin-filled alveolus and is the only cell present in the cavity, it appears a very obtrusive object.

In the small bronchioles, the epithelium has been shed into the lumen, and there is an exudation of leucocytes and fibrin with dilatation of the capillary vessels of the walls.

The inter-alveolar septa are thickened in places, in others—those between alveoli filled with leucocytes—they have disappeared and been absorbed, so that several alveoli have run together, forming a mass with a tendency to soften in the middle.

There is a sharp line of demarcation between the affected alveoli and those comparatively healthy. The capillary vessels in the walls of the latter are much dilated, however; the alveoli are somewhat collapsed with swollen walls, and there is a slight exudation of fibrin with red cells, catarrhal cells and leucocytes in some.

The colon.—Only the bases of the glands remain. The vessels in the remains of the mucous and submucous coats are widely dilated with blood which has extravasated in places. In these coats there is a great accumulation of leucocytes and small masses of brownish-black pigment. This pigment has accumulated in some of the large spindle-shaped connective-tissue cells.

Comments.—The pneumonic consolidation took a most remarkable form in this case. Microscopically the fibrinous exudation was intense in places, and the condition thereby would at once be classified as "lobar." But the distribution was not that of lobar pneumonia, nor even of lobular—it was unique. The symmetrical arrangement suggests passage of the infecting agent by the blood-stream, probably from the intestines, and the fact that the masses occupied deep positionsin the lungs makes one think that the organisms were carried in embolic masses from the sloughy intestine, and were arrested in the larger central rather than the smaller peripheral pulmonary vessels in consequence of their size. The upper lobes were not affected—which tends to show that emboli, or organisms in the blood-stream, are more apt to be swept into the upper rather than the lower portions of the lungs.

Other points of note are:—(1.) The sharp boundary line between the consolidated and non-consolidated lung tissues. (2.) The presence of alveoli filled with fibrin only, strictly adjacent to others filled with leucocytes only. (3.) The absence of clinical signs of the pneumonia.

I desire to thank Dr. Camac Wilkinson for allowing me to make use of the clinical notes of the case; Dr. Stephen, his house physician, for his careful compilation of them; and Professor Welsh, of the pathological department of the University, for permission to publish the pathological report, and for invaluable suggestions and criticism during the preparation of this paper.

SOME CURIOSITIES OF TERMINOLOGY.

By F. Guy Griffiths, B.A., M.B. (Syd.), Gundagai, N.S.W., late Resident Pathologist, Sydney Hospital.

MEDICAL nomenclature is exceedingly inconsistent, partly because the conception of the conditions and the nature of the operations to be described have varied from time to time, so that a name has often continued in vogue after its special application has ceased to exist; and partly because barbarous terms have been recklessly coined by persons ignorant of, or indifferent to, all conisderations of philology, so that in many cases hybrids of the most objectionable nature have resulted.

To take a well-known example of the first source of error. The operation of laying open the colon was rightly named *colotomy*, and at first this word included all cutting operations on that organ. Later, however, a distinction came to be drawn between (1) opening and closing a viscus and (2) establishing a permanent opening in a viscus. Thus, in the case of the stomach, the former was called *gastrotomy*—γαστήρ, stomach, and τέμνω, I cut—and the latter *gastrostomy*—γαστήρ and στόμα, a mouth. The usual operation on the colon, however, was that of making a fistula; and with this operation the name *colotomy* remained associated for years, and it is only recently that an attempt has been made to introduce the more accurately descriptive term, *colostomy*.

As examples of objectionable hybrids, due to error of the second class mentioned above, we have *vaginitis* and *tonsillitis*, barbarities which will in all probability be gradually displaced by *colpitis* and *amygdalitis*, in accordance with the recent tendency to adopt the principle of adding Greek suffixes to Greek roots only — a principle which is indeed customary in most instances, *e.g.*, inflammation of the *testis* is called *orchitis* (Gr. ὄρχις); of the *uterus*, *metritis* (μήτρα); of the *stomach*, *gastritis*; of the *mouth*, *stomatitis*, and so on. Although vaginitis and tonsillitis show a slight tendency to disappear, other similar atrocities remain well established, the most common, perhaps, being *appendicitis* and *appendicectomy* or *appendectomy* (!) Tubby, in his monograph on the disease, rightly describes the term *appendicitis* as "both barbarous and cacophonous," and with this opinion Sir Frederick Treves agrees. Küster advocated the introduction of *epityphlitis* (*cf.* perityphlitis) or *ekpyhaditis*—ἐπίτυφλον, the organ attached to the cæcum, or τυφλόν, and ἐκφυάς, the offshoot. Epiphyaditis seems more natural, and has, moreover, the advantage of classical precedent, epiphyaus having been used by Galen, though he did not necessarily refer to the appendix cæci when he spoke of ἐπιφυὰς τῶν ἐντέρων. The adoption of one or other is urgently called for, unless medical terminology is to continue a laughing stock of all scholars. Yet another similarly objectionable term is *ovariotomy*: why is this used in place of *oophorotomy?* No one says *ovariectomy!*

Recently a still more hideous atrocity has been perpetrated, namely *orchidectomy*, to be shortly followed by *orchidopexy*. Surely the author is under a misapprehension in regard to the genitive of ὄρχις, which is ὄρχεως and not ὄρχιδος. We may shortly expect *orchiditis*, unless his mania subsides.

An American, out-Heroding Herod, produced *acidophile* (now generally discarded in favour of *oxyphile*, ὀξύς and φίλος) and *uric acid æmia*, the latter as a synonym of *lithæmia* or the *uric acid diathesis*.

But apart from etymological irregularities, we find in medical names peculiarities of many different varieties, *e.g.*, *cholæmia* means not *the presence of bile in the blood* (*cf.* hæmoglobinæmia, pyæmia, bacteræmia), but *poisoning by bile*—a condition which would better be described by *choletoxismus* (*cf.* ichthyotoxismus, tyrtoxismus). However, it is comparable with the universally accepted *uræmia*, and so may be excused.

Again, if the condition produced by the presence of an *embolus* is called *embolism*, why is that due to a *thrombus* called *thrombosis?*

Extremely useful words are *salpingo-oophorectomy* and *pan-hysterectomy*, which, though cumbersome, are better than *removal of the Fallopian tube and ovary* and *complete excision of the uterus*: there would seem to be room for *ophthalmectomy* and *pan-prostatectomy*, and some name to describe Alexander's operation—possibly *terebrachesis*, shortening the round (ligament). If it be objected that such compound words of Greek origin are too clumsy and unintelligible, it may be replied that they are at least less clumsy than the corresponding English *phrases*, and more intelligible than names depending on the author of the particular procedure. It is not only in the case of operations that our nomenclature is inadequate. Could any anatomical structure be more neglected in a nominal way than the *broad ligament of the uterus?* Why not call it *meso-salpinx*, and have done with it? So uncouth a double as *fatty degeneration* might well retire in favour of *steatosis* (by no means a new comer) or even *liposis*, in conformity with fibrosis and ankylosis. If relief of hernial strangulation be called *kelotomy*, why may not *kelacea* (*cf.*, panacea) be used to describe *radical cure of hernia?*

Phoroblast or *phorbhyst* would well describe *connective tissue*, and *phorocyte*, *connective tissue cell*; and then *proliferation of the connective tissue cells of the part* (a frequently recurring phrase) might be called *proliferation of the topical phorocytes*, or even reduced to *local phorocytosis*, and yet remain self-explanatory. A suggested name for opening and permanently draining a hydatid cyst (usually called *marsupialisation*) is *hydatidostomy*, or, if this be met with disfavour, *ecchinocystostomy*.

In some cases we find that general terms have gradually lost their wide significance, and assumed a particular single meaning. *Typhoid*, that is *like typhus*, now means the specific disease *typhoid fever*. The more general meaning is, however, retained in *typhoid state*, that is, a state common in the subjects of *typhus*, and without any reference to enteric, though the subjects of this latter disease, too, are liable to sink into a similar condition. *Tubercle*, also, is now used only in a restricted sense; it means not a *nodule* but a condition resulting from the action of the bacillus Kochii. *Diphtheritic*, formerly applied to any membranous formation, now relates almost exclusively to the disease diphtheria. It is unfortunate that no special names have been devised for these diseases; *enterica* has been suggested for the first, but I know of none for the second and third.

There are a number of terms in general use by the laity which lack medical counterparts, *e.g.*, *paralysis of the brain*, *brain fever* (so commonly the fate of the hapless hero of our novelists); the reason seems to be that there is no corresponding condition to be named. *Cancer* itself is employed with varying significance; but lately Henry Moris has defined it as including all forms of malignant disease—epithelioma, rodent ulcer, carcinoma, and sarcoma: this, if as seems likely, accepted generally, should tend to save a lot of confusion in the future.

While in some directions our paucity of terms is extreme, in others there is a counter-balancing plethora. *Erythrocyte*, *xanthocyte*, and *hæmacyte* (or *hæmocyte*) compete for the privilege of describing the humble *red blood corpuscle*, and so slight is the advantage hitherto achieved by any one of them that the tripartite English name still holds its own, though lately the weighty influence of Erlch has increased the prestige of *erythrocyte*. Similarly at one time *oligocythæmia alba* was an opponent of *leucopenia*; and *osteitis* and *ostitis* still struggle, though *periostitis* has no competitor.

A curious change has taken place in the name of the operation of opening the peritoneal cavity: the first on the field was *gastrotomy*, and the Greek γαστήρ really means *belly* (Latin *venter*), and not *stomach* (*ventriculus*); but when *gastrotomy* become restricted to cutting operations on the special viscus, *laparotomy* (λαπάρα, wall, flank) was introduced in its place, and this being found unsuitable, has lately given way in turn to *cœliotomy* (κοιλία, body cavity), and this itself in the mouths of some gynæcologists is applied only to opening the pouch of Douglas through the posterior vaginal fornix—*abdominal section* being used for the operation through the anterior abdominal wall. *Vaginal cœliotomy* is certainly not a misnomer for the common gynæcological procedure, but this latter is well worthy of a more distinctive name, and might be called *saccotomy*, *i.e.*, cutting into the pouch (σάκκος), the term cœliotomy being reserved for the operation at present vaguely described as *abdominal section*.

CLINICAL AND PATHOLOGICAL NOTES.

ORCHITIS AND MUMPS.

On October 13th, 1903, I was consulted by a young man of 23, with acute orchitis of the right testicle. Not finding any local cause, I asked if he had had mumps. He said, "Yes, last week." One of his brothers, aged 21, came to me on November 4th, with mumps and severe orchitis of the right testicle. The constitutional symptoms were severe, the temperature reaching 105° F. On November 23rd, another brother, aged 14, came with slight orchitis of right testicle, after mumps. They all recovered quickly.

The cases are noteworthy for two reasons:

1. All the males in the house who were attacked—three brothers—had orchitis after mumps.

2. The orchitis was on the right side in every case.

EDWARD E. MOULE, M.B., B.S.
Mannum, S.A.

A CASE OF INJURY OF THE POSTERIOR SURFACE OF THE EPIGLOTTIS.

A GENTLEMAN of middle life was sent to me because three days previously he had "felt something stick sharply in his throat" while eating some fruit salad. There was a wound on the posterior surface of the epiglottis to the right of the median line and almost at the tip of the structure. The area was about half the size of a threepenny piece and was flat, with a sharply-defined border, giving one the impression that the mucous membrane had been neatly shaved off by some very sharp edge, such as a small piece of broken glass often has. The only symptom complained of was some pain of swallowing, which, when I saw him, had become merely a feeling of discomfort. What I wish to draw attention to is that this wound was produced during the act of swallowing, and was situated *on the posterior surface* of the epiglottis. According to Professor Anderson Stuart's theory of the mechanism of the closure of the epiglottis, "the distal portion does not fold down as a lid, but is applied to the most posterior part of the back of the tongue, so that the hollow laryngeal surface of the epiglottis continues backwards the surface over which the bolus glides from the tongue." If the old theory of the folding backwards of the epiglottis as a lid over the top of the larynx were correct, then it is not the posterior aspect of the epiglottis which we should have expected to see injured, but the anterior.

Sydney. H. RUSSELL NOLAN, M.B.

Helping the Hospitals.—At a recent meeting of the Queensland Hospitals Aid Association, held in the committee room at the Town Hall, it was resolved—"That the basis for distribution for 1904 be on the Burdett system—that is, on the number of beds occupied in each institution for the 366 nights of this year." Also—"That the benefiting institutions for 1904 be the General Hospital, Sick Children's Hospital, Lady Bowen Hospital, and Lady Lamington Hospital. The treasurer read the balance-sheet, which showed the distribution for the year 1903 to the hospitals as follows:—General, £577 3s; Sick Children's, £183 2s; Lady Bowen, £92 2s; Lady Lamington, £77; leaving a credit balance on 31st December of £170 13s 10d. The balance-sheet was unanimously adopted, and satisfaction was expressed at what had been accomplished.

REVIEWS AND NOTICES OF BOOKS.

THE RÖNTGEN RAYS IN THERAPEUTICS AND DIAGNOSIS. By William Allen Pusey, A.M., M.D., Professor of Dermatology in the University of Illinois; and Eugene W. Caldwell, B.S., Director of the Edward N. Gibbs X-Ray Memorial Laboratory of the University and Bellevue Hospital Medical College, New York. Handsome octavo volume of 591 pages, with 180 illustrations, nearly all clinical. W. B. Saunders & Co. Melbourne: Jas. Little. 1903. Price, 22s 6d.

It has been the aim of the authors of this work to elucidate fully the practical aspects of the subject. It is evident that all the authentic literature which has developed since Röntgen's wonderful discovery has been carefully digested, this being supplemented by the extensive experience of the authors. The value of the X-rays in diagnosis has been discussed in a thoroughly practical manner, and their limitations in this field indicated. Particular attention has been devoted to the use of the X-rays in therapeutics. Nearly all the illustrations in this section represent actual clinical subjects, and show with unusual fidelity the conditions before the use of the X-rays at various stages of their application, and, finally, the therapeutic results obtained. Almost every condition in which it is conceivable that the X-rays might be availed of has been mentioned: a complete history in each case is given, together with an account of its progress, and conclusions are then drawn as to the value of the rays for that particular disease. Full details are also given as to the use and management of the apparatus necessary for X-ray work. All the methods with which the best results have been achieved have been carefully described in a comprehensive way. There are chapters on X-ray Tubes, Induction Coils, and Controlling Apparatus, Static Machines, Fluroscopy, Radiography, Photographic Materials used in Radiography, etc. This section is also fully illustrated with instructive photographs and drawings of the apparatus, including four beautiful full-paged coloured plates of X-ray tubes. In fact, the work will be found of invaluable assistance not only to the general practitioner, but also to the dermatologist, presenting, as it does, the very latest advances in X-ray therapeutics and diagnosis.

The volume is very neatly compiled, printed in excellent type, and on superior paper. The illustrations are very clear, and the publishers are to be commended for having omitted to advertise the names of the various makers of apparatus, as is so generally the case in works of this class. Perhaps it is not too much to say that this is the most up-to-date book published on X-ray apparatus, and the therapeutics of the rays; and the authors and the publishers alike are to be congratulated on having produced such an excellent edition. L.H.H.

SQUINT: ITS CAUSES, PATHOLOGY, AND TREATMENT. By Claud Worth, F.R.C.S. London: John Bale, Sons & Danielson, 1903. Price, 6s.

This is a very practical work, giving the author's novel and original method of treating an affection for which existing methods of treatment give frequently very unsatisfactory results. The method appears sound in principle, and is based on large experience (of 2337 cases), and no statement is made without instances in corroboration being adduced. A very important gain claimed by the author is the retention of binocular vision (in cases treated sufficiently early), which is so very rarely attained by present methods. Another point is the early age (under three years) at which cure of squint can be effected. According to the writer the primary cause of squint is a defect in the prism faculty, and his treatment is mainly directed to the training of this sense. He rejects Donder's theory that hypermatropia is the fundamental cause of conseguative squint, though allowing that it stands in close ætiological relation to it. Amongst other predisposing causes, he recognises anisometropia, peteœphoria, specific fevers, violent mental disturbance, and hereditary influence.

For training the fusion faculty he uses an instrument to which he has given the barbarous name of "amblyoscope," which is an improvement on the various forms of stereoscope, devised (without much practical utility) by others. His instrument consists of two short brass tubes bent away from each other, hinged at the proximal ends and furnished at the other ends with the object slides, consisting of devices drawn in translucent paper, examples of two of the devices being a bird and a cage. A mirror in each tube reflects each picture through a lens of suitable focus into each of the patient's eyes. Towards the distal end of the tubes is a brass arc with slots and binding screws for regulating the divergence of the tubes. The child is given the instrument and is told it is an amusing toy. If the cage be before the fixing eye and the bird before the squinting eye he will see at first only the cage. Then by a special apparatus (two lamps will do as a makeshift) the illumination of the picture of the bird is increased and that of the cage diminished until a point is reached when the image of the bird is forced in the squinting eye. If he has now lost sight of the cage, the illumination is regulated until he sees both bird and cage, when the two tubes are arranged and diverged in order to make the bird go into and out of the cage. After a little practice the illumination is gradually equalised, and the angle of convergence of the two tubes altered. The powerful "desire for fusion" thus established often suffices to cure the squint. Other aids the writer uses are correction of ametropia, occlusion of the fixing eye, atropine to the fixing eye *alone*, and he does not hesitate to operate by tenotomy or advancement when the deviation is not overcome by other means. We heartily commend the book as a valuable contribution to ophthalmology. F.A.P.

MORPHINISM AND NARCOMANIA FROM OTHER DRUGS. By T. D. Crothers, M.D., Superintendent of the Walnut Lodge Hospital, Conn.; Professor of Mental and Nervous Diseases, New York School of Clinical Medicine, etc. Philadelphia and London: W. B. Saunders & Co. Melbourne: Jas. Little. 1902. Price, 10s.

The special object of this book is to group the general facts and outline some of the causes and symptoms common to most cases of narcomania, and to suggest general methods of treatment and prevention, and in this way try to bring the subject out from its present empirical stage to higher and more scientific levels, and to encourage further and more exhaustive studies. More than one-half of the book is of course devoted to the subject of morphinomania, and contains a large amount of useful information on the points of symptoms and diagnosis, with many illustrative cases. It is remarkable in how many different ways the morphinomaniac may show aberration from a normal individual, and a careful study of the cases referred to in this book will be of great service in putting the medical practitioner on the scent of the morphinomaniac. In the treatment of this condition the author rightly dwells upon the great difficulty of permanent cure in a large number of cases, and the frequency of relapse, even after months of abstinence. This is often due to a mistake in supposing that all is accomplished when the patient is deprived of his morphia for a month or two, and that there is no fear of any resumption of the vicious habit. But, as the writer well points out, it is precisely at that period of the "cure" that the greatest danger of relapse occurs, for then the intense restlessness and insomnia become almost unbearable, and the patient resorts again to the drug. Hence in the treatment of any case of morphine addiction it is essential that the patient leaves his home and place himself unreservedly in the hands of his physician for at least twelve months. Any shorter period of treatment will probably fail; even after twelve months a cure is by no means established, and the patients still require the most careful watching, for no one knows how cunning these people become, and to what desperate methods they will resort to secure their drug.

The addiction to opium in the form of opium smoking is said to be seriously on the increase, and it becomes an even more difficult thing to cure this habit. The degeneration of the higher faculties and the complete loss of moral control render these patients absolutely incurable, unless they are taken early, and kept under restraint for a long time. The writer points out how even in cases where the victims are anxious to be rid of the habit they will yet resort to all sorts of means to get it, thus showing what a desperate hold the habit obtains over them.

The remaining chapters of the book are devoted to some of the other narcomanias, such as cocain, chloral, chloroform, etc. In these chapters some useful points in the diagnosis of symptoms which may be due to the various forms of drug habits are given. One may express some surprise to find the drinking of coffee and tea included in the category of narcomanias, but there appears to be some justification for it, at any rate as regards tea, as every practitioner in the back blocks in Australia knows well. The habit of secret drinking extract of lavender and Eau de Cologne, which appears to be gaining ground extensively in England in the middle and upper classes, is one which the practitioner needs to keep constantly before his mind in dealing with neurotic and neurasthenic women. There is one drug not referred to in this work, recently introduced as a substitute for morphia in some cases, we mean heroin, addiction to which may become as marked as in the case of morphia itself, and a "heroin habit" may easily be induced. It is important to remember this, as one is told that this drug can be used with impunity, as there is no fear of a habit being induced. Heroin should be used with as much caution as morphia or any other opium alkaloid; and hypodermic injection of any alkaloid of morphia or cocain should only be used with the greatest circumspection, owing to the danger of the patient becoming a morphia habitué.

We can confidently recommend this book as one likely to be of considerable assistance to the medical practitioner in his dealing with a most difficult class of patients, and in enabling him to solve the problem of many a mysterious illness. G.E.R.

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MEDICAL ORGANISATION.

In a recent address to a North of England Medical Association, Sir Victor Horsley, the chairman of the Representative Meeting at the British Medical Association gathering at Swansea last year, took occasion to refer to the necessity for the organisation of the profession, and dwelt at some length on the advantages to be derived from membership of the British Medical Association, which now includes a very large percentage of members of the profession, at any rate in Great Britain and Ireland. He advocated the union of the society he was addressing with the British Medical Association, and pointed out how what appeared to be insuperable difficulties to such a union could be overcome. He further showed how, under the new constitution of the British Medical Association, every member would be enfranchised and have a voice in the management and policy of the Association. The abolition of the "unattached member" and the re-arrangement of the Association in Divisions and Branches completed the work of the organisation of the profession, and all that was needed to make it thoroughly effective was the enrolment of every member of the profession in the ranks of the B.M.A.

What is true in the old country is also true of this Commonwealth, and the necessity of a complete organisation of the profession in these States is more and more apparent. The days are past when a medical man can stand aside from medical politics and pursue the even tenor of his way without detriment to himself or to his colleagues. We live in troublous times. Unions of all kinds are in the air, and, unfortunately, the medical profession is bound in self-defence to adopt some such union or organisation as will enable its members to hold their own against encroachments and disabilities of various kinds.

It must be considered sooner or later how such a complete organisation can be effected in all these States, so that a uniform policy can be adopted. The triennial Australasian Congress, while affording an excellent opportunity for social and professional intercourse and the exchange of views on strictly professional matters, carries practically no weight. It has no permanent organisation which can carry out its suggestions as to matters of medical policy or questions of medical ethics. It has been proposed (and the matter will be further discussed in due time) that the triennial Australasian Medical Congress should give place to an annual or biennial meeting of the Australasian branches of the British Medical Association. This would strengthen the branches of the Association in the different States and also furnish the machinery for the carrying out of a uniform policy on various matters of medical ethics. But such a change could only be effected by some mutual concessions, and with due regard to other allied existing associations. While in New South Wales the British Medical Association is a powerful body, embracing a very large percentage of the members of the profession, in some of the other States this Association is either non-existent or at a disadvantage. In Queensland the union of the Medical Society of that State with the local branch of the B.M.A. was effected some years ago with considerable advantage to the profession there. In Tasmania no such society exists; the Launceston sub-branch of the Victorian Branch is practically defunct, so that the only active medical organisation in Tasmania at present is the Medical Defence Association. In Victoria the strongest medical society is the Medical Society of Victoria, which embraces in its membership all the leading practitioners in that State. The British Medical Association Branch, on the other hand, has never rallied to any extent from the severe blow inflicted on it by the O'HARA case; and while we believe that the profession as a whole in Victoria is at one in its desire for a good organisation, yet some apparently serious difficulties exist in the way of effecting anything like an amalgamation between the Medical Society and the British Medical Association. In South Australia and in Western Australia the British Medical Association branches are the most powerful societies, though even there there is room for improvement in the number of members and in the effectiveness of the organisation.

We hope that Sir VICTOR HORSLEY's address will be carefully considered by the different Medical Societies in these States, and that by the time the next Congress meets in Adelaide serious attention will be directed to this important question, and definite steps be taken towards completing the work of organising the profession in this Commonwealth.

EXAMINATIONS IN THE MEDICAL CURRICULUM.

DR. BARRETT, of Melbourne, has on previous occasions condemned the present examination system, and at a recent meeting of the Melbourne University Senate, in moving on behalf of the University Council the reception of some new legislation dealing with the compulsory attendance of students at lectures, he referred to the examination system as an "evil which cannot be got rid of." We presume he means to add the words "at present;" for, on the same occasion, he remarked that "the tendency of the time was against taking the same notice of examinations that had been done in the past." With this view we entirely agree, and we have no hesitation in saying that in our opinion the whole question of medical lectures and examinations urgently requires revision in the light of modern educational views and standards.

The student enters his medical school to be guided in the use of his hands and his senses; to have his mind trained to reason accurately and to form clear judgments upon sets of facts and circumstances placed before him. His *ultimate* object is to pass the examinations to enable him to gain a degree, or a qualification to enable him to practise his profession. But we fear that the latter object becomes the most important in the student's eyes, and he consequently devotes too large an amount of time to cramming up a mass of facts and theories upon which he will be examined, and which will very probably be forgotten soon after he has "passed." This is obviously a waste of energy, and the time would much more profitably have been spent in some practical work.

Under present conditions, a student who happens to have a good memory may slur over his practical work, waste a large part of his year, and then by dint of cramming during the last three months, succeed in doing a good theoretical examination, and so obtain his degree. *But that student is not educated.* On the other hand, another student may be diligent all the year in his attendance on lectures, in the laboratories and the hospital wards, but may not have such a good memory, nor the faculty of expressing himself satisfactorily, and from a variety of accidental circumstances may fail to pass his examination and be "deferred." But surely the latter is better educated, and may be much more worthy of the degree than the former; and that worthiness would be ascertained by the professor or teacher in the course of his year's work. These are no mere hypothetical cases, and we submit that while a certain amount of testing of a student's knowledge is essential for his successful training, the great emphasis at present laid upon the way the student acquits himself in the final examinations, with an almost total disregard of his methods of working and diligence in his class work, is wrong in principle, inasmuch as it fails to ensure the true education of the student. When the yearly examinations are relegated to their proper place, and the fitness, or otherwise, of a student to receive his degree is made to depend very largely upon the results of his previous diligence and work in the lecture room, laboratory, and hospital ward, then, and not till then, will medical education be conducted upon right lines.

THE MONTH.

Preservatives in Food.

We are glad to note that the Premier of New South Wales, Sir John See, is evidently not in accord with the conclusions arrived at by the select committee on preservatives in food, and that he, at any rate, recognises the great importance of the maintenance of a pure and unadulterated food supply. In reply to a question put to him in the Legislative Assembly recently, he is reported to have spoken as follows:—"I am aware that the Board of Health has declared that certain preservatives are injurious to public health. My position is this: As long as we have a Board of Health, formed of capable men, who understand all the scientific dealings with matters of food supply and liquids, I should be placing myself in a very invidious position if I refused to accept the recommendation of that board. But I must say I think the question of public health is of more importance than individual interests. I say this advisedly, and I am not prepared to accept the responsibility, as head of the State, of refusing to carry into effect recommendations made by gentlemen who are supposed to know more about these matters than I do."

The Care of the Consumptive Poor.

Once again the necessity for some provision being made for cases of advanced pulmonary tuberculosis among the poor has been urged upon the N.S.W. Government. During the short session of the Parliament last month the subject was raised by Dr. Nash in the Legislative Council on the question of adjournment. He pointed out that during 1901, 1173 persons died from consumption, which, it was admitted, was in its early stages a curable and at all times a preventable disease. He was strongly of opinion that the Government should, in the public interest, do more than it did to provide suitable accommodation for the consumptive. Mr. Mackay, Vice-President of the Executive Council, in reply, said he would bring the subject under the notice of the Cabinet. We believe that the Premier and his colleagues are quite convinced of the necessity for such an institution, but their efforts have been frustrated, partly by want of funds and partly by the difficulty of securing a suitable site, as so much opposition has been offered by local vested interests to the establishment of a hospital on the sites hitherto selected. We sincerely hope that these difficulties will be overcome, and a suitable site and building be secured at an early date.

The Spitting Nuisance in Trains and Trams.

In August last the New South Wales Railway Commissioners, in view of the large amount of public attention which was being directed to the danger of the spread of pulmonary tuberculosis by means of the expectoration passed a by-law imposing a fine of £2 on any person spitting into or upon any railway carriage or tramcar. Since the by-law was passed a considerable improvement has taken place in the condition of the railway carriages and tramcars, although no prosecution has been made, so far, for the offence. They reach their sheds every evening in a fairly clean condition. With a view of still further improvement, and in pursuance of the same policy of interest in the public health, the Railway Commissioners have instructed tram conductors, tram guards, and other traffic officers to keep a strict watch, and to report any person found acting offensively in regard to expectorating, and the department will take legal proceedings against persons who infringe the by-law.

Naval Ambulance Reserves.

According to the London correspondent of the *Sydney Morning Herald* the Admiralty are proposing to form reserves of ambulance men in the colonies for service in his Majesty's ships and hospitals abroad in time of national emergency and maritime war. The scheme rests on a voluntary basis, and comprehends the formation of small reserves of ambulance men in Canada, Newfoundland, the Cape, Australia, New Zealand, Hongkong, Malta, Gibraltar, and possibly other British possessions, as it is considered highly important to be able to strengthen the sick berth staff of vessels and hospitals abroad on the outbreak of war. It is understood that the active co-operation of the officials of St. John Ambulance Brigade and St. Andrew Ambulance Association Corps in the enrolment of volunteers has been renewed, and it is hoped that the members of the brigade and corps, as well as those of other ambulance associations in the colonies, may volunteer for the proposed reserves for services in times of war. It is anticipated that not more than from 50 to 150 would be required in any colony as a local reserve. The project is receiving the hearty support of the Secretary of State for the Colonies, and has received a decided impetus by the announcement that the members of St. John Ambulance Association and of the Civil Ambulance and Transport Brigade of Sydney are agreeable to volunteer for this service. Dr. Henry C. Woods, R.N., Inspector-General of Hospitals and Fleets, the senior retired naval medical officer, has been appointed to organise the new reserve.

The N.S.W. Government and the King Edward Hospital.

The committee of the King Edward VII. Hospital, a small institution which has been working on voluntary lines to meet the demand for immediate treatment of patients in and about the Rocks district of Sydney, have applied to the Government for the use of a building now occupied by the Gipps Workmen's Club. Mr. Waddell, the State Treasurer, promised to lay the facts before the Premier, and if that gentleman decided that the hospital was a necessary institution, then he (Mr. Waddell) would go into the merits of the application for the building referred to. In this connection a correspondent of the *Sydney Morning Herald*, signing himself "Taxpayer," makes some very pertinent remarks, with which we entirely agree He says: "Except that the members of this Government seem capable of any folly it is inconceivable that a favourable reply should be given to such a request when work has been suspended on the needed Prince Alfred Hospital additions, and not even begun on the much-needed alteration to the Sydney Hospital and in the most needed Hospital for Incurable Consumptives, the want of which means that a large number of persons at present healthy will be infected this year by the fatal disease. There is no need whatever for a hospital in a situation as close to the Sydney Hospital as Miller's Point.

Specialists at the Melbourne Hospital.

Some short time ago the appointment of medical men to special departments at the Melbourne Hospital was under the consideration of the committee, and as there was some difference of opinion on the point whether they had the power to appoint specialists without first receiving the sanction of the governors, it was agreed that counsel's opinion on the subject should be sought. At the last meeting of the committee an opinion by Mr. Isaacs, K.C., was submitted, in which he said: "In my opinion the committee of management have not the right to appoint specialists. The question is not altogether free from doubt, but on the whole I entertain no great hesitation in the matter." As this opinion affects a number of specialists already appointed, the matter was referred to the legislative committee for advice in regard to the positions of these officials. The specialists at the Melbourne Hospital are:—Dermatologist, oculist, aurist, skiagraphist, and several hon. medical electricians and anæsthetists.

Royal Society of Queensland.

At the annual meeting of the Royal Society of Queensland, held in the Technical College Hall, Brisbane, last month, the president (Dr. Wilton Love) occupied the chair, and there was a fair attendance of members. The annual report of the council was read and adopted. Dr. R. Hamlyn-Harris, of Toowoomba, was elected a member of the Society. The following gentlemen were elected as a council for the ensuing year:—President, the Hon. J. Cameron, M.L.A.; vice-president, J. Brownlie Henderson; hon. treasurer, Hon. A. Norton, M.L.C.; hon. secretary, J. F. Bailey; hon. librarian, Mr. R. Illidge; members of council, W. J. Bryam, Dr. W. Love, C. J. Pound, J. Norton, B.Sc., Dr. J. Thomson; hon. auditor, A. J. Turner, F.I.A.V.

Nurses' Hours at the Sydney Hospital.

At the annual meeting of the subscribers to the Sydney Hospital, one of the speakers advocated the reduction of the hours of work of the nurses and some alteration in the arrangements of their duties, so that they might be relieved of some of the rough work they have to do at present. Sir Arthur Renwick, in his concluding speech, referred to the question and stated that the hours of the nurses had been shortened during the year, and the staff had been strengthened as much as possible so as to lighten their duties.

Diphtheria.

The attention of all medical practitioners is drawn to the fact that the board of management of the Children's Hospital, Sydney, decided, owing to its dilapidated condition, to close the diphtheria cottage on March 1st. After this date they will be prepared to treat only such cases as may occur in their own neighbourhood who are too ill to bear the journey to the Coast Hospital.

BRITISH MEDICAL ASSOCIATION NEWS.

PROCEEDINGS OF AUSTRALASIAN BRANCHES.

Queensland.

A meeting of the Queensland Branch was held on Friday, February 5th, Dr. W. S. Byrne (president) in the chair, with an attendance of 19 members.

Dr. O'Brien, curator, exhibited the following specimens:—(1) Very early fœtus; (2) appendix (two); (3) large ovarian cyst; (4) hydatid cysts of liver; (5) accumulation of fruit seeds obtained from the rectum of a boy.

The President welcomed Dr. Jos. Little (after a long absence from Brisbane) and Dr. L'Estange, a new arrival in Brisbane.

A discussion took place with reference to the receipt by members of a circular letter and pamphlet relating to a patent pessary for the prevention of conception, and it was resolved—"That a protest be sent to the agent, calling his attention to the danger and immorality of the instrument."

Dr. W. S. Byrne read a paper on "Infant Mortality and Infant Feeding." (See p. 56.)

Dr. Marks supported the suggestion that the matter of infant-feeding should be undertaken by the State, and in consideration of the vital importance of the whole question, thought that the paper should be published in the lay press.

Dr. Page advocated sending a copy of the paper to the Home Secretary.

Dr. Turner thought that the provision of pure milk for infants should, if undertaken by a public authority, be by the municipal bodies rather than by the State—an opinion in which Drs. Little, Robertson and Milton Love concurred. He stated that the danger of tubercular infection from milk was not so great in Queensland as in colder climates, because here the milk was generally boiled. He emphasised the importance of the necessity of cleanliness on the part of milkers, and, as so long a time elapsed between the milking of the cows and the delivery of the milk in the city—five hours or more—that some plan should be adopted by which the milk might be cooled during the interval, although this would increase its price; that for the very poor a scheme involving the supply of milk by the municipalities was the only safe one.

Dr. Little remarked on the comparative ease of bringing up bottle-fed children in the country as compared with the city, and pointed out that the sterility of the milk was of more importance than its modification to ensure a standard approximating human milk. He emphasised the practical impossibility of securing cleanliness on the part of milkers, who were generally rough, uneducated boys; and advocated the patronage by the profession of milkmen who could be relied upon to carry out the directions of medical men.

Dr. Halford pointed out that a child inherited through its mother's milk protective influences against various infections, and thought that there might be a danger in the municipal supply of milk in that mothers would be inclined to hand over the care of their babies to others rather than to undertaking the feeding of them themselves.

Dr. Flynn remarked that similar difficulties to those described as existing in Brisbane occurred in Ipswich. He referred also to the danger in typhoid fever in adults from drinking impure milk, this being the staple food during the acute stage of the disease.

Dr. Milton Love spoke of the difficulties of controlling private milk sellers, and gave examples from his own experience.

Dr. Wield hoped for the time when the prescription of pure milk might take the place of the familiar powder and mixture.

Dr. J. E. F. Macdonald suggested that a laboratory for the preparation and supply of pure milk might be instituted in connection with the Children's Hospital.

Dr. Brockway thought that much valuable time in the information of the public would be saved if the President would allow himself to be interviewed on the subject by the lay press.

In reply, Dr. Byrne objected to publication in the lay press of any paper until it had appeared in the medical press. He emphasised the impossibility of teaching milkers bacteriological cleanliness, and thought that the committee of the Children's Hospital might employ a man who could be taught to sterilise milk for the purpose of sale to the patients.

New South Wales.

Council Meeting.

The Council met at the Association Rooms on Tuesday, 19th January. Present: Drs. Brady, Worrall, Fiaschi, Crago, Abbott, Rennie, Foreman and Newmarch.

The minutes of the previous meeting were read and confirmed.

Letter was read from Dr. Hankins stating that he intended taking a trip to England.

Resolved—"That Dr. Hankins be granted the necessary leave of absence."

Dr. Abbott was appointed acting hon. secretary up to the annual meeting, and Dr. Worrall was appointed to countersign the cheques during the absence of Dr. Hankins.

Letter was read from Dr. Collier (President-elect) asking for representation of this Branch at the annual meeting of the parent Association at Oxford.

Requisition was received from the various medical associations asking that a special general meeting of the medical profession be held to deal with the Grooms' and Coachmen's Union.

Resolved—"That a special general meeting of the medical profession be held at the Association Rooms on Friday, 29th January, at 8.30 o'clock."

Balmain Dispensary.—Some further correspondence *re* the Balmain Dispensary was read.

Letter was read from Dr. Taylor Hancock, of Samarai, British New Guinea, asking to be elected a member of the Branch. Received, and form to be sent.

New member.—Dr. Bertram, of Coonamble, was elected a member of the Branch.

Letter to be sent to Dr. Hankins asking him to see the Secretary of the Association with reference to the membership of the various Branches.

Letter was read from Drs. Lester and Hawthorne, of Mudgee, with reference to the hospital dispute. To be acknowledged, and the writers informed that the Council could take no action in the matter.

Ballarat.

The annual general meeting of the above Branch was held at Lester's Hotel at 8.30 p.m. on January 28th, 1904.

Present: The president (Dr. J. F. Usher) and 18 members.

Apologies were received from Drs. Connor, Courtney, Davies, Hardy, Martin, Salmon, Showman, and Beattie-Smith.

The minutes of the last annual meeting were read and confirmed, on the motion of Drs. JORDAN and R. SCOTT.

Drs. CUSSEN and JORDAN moved—"That correspondence from the St. John's Ambulance Association and the Medical Defence Association be received." Carried.

ANNUAL REPORT.

In presenting the annual report and balance-sheet, your Council is pleased to state that we have now 38 members, and that all subscriptions have been paid. It is with great regret that we have to record the death of two members—viz., Dr. W. Chisholm Ross and Dr. G. Palmer, the latter having been one of our most prominent members, and an ex-president. During the year Dr. Radcliffe, one of our earliest members, also died, and we have to sympathise with Dr. A. Scott in his recent bereavement.

At the termination of our April meeting, the members assisted at the unveiling of an artistic bronze tablet, erected in the Hospital to the memory of the late Dr. Pinnock.

Perhaps the most important change made during the year was the alteration of the meetings from every three to every two months, and the day of meeting from Thursday to Saturday. This latter step was taken principally with a view to suit the convenience of country members, but as only two put in an appearance at each of the last two meetings, we are inclined to doubt the wisdom of the change.

A minimum scale of fees to be charged for country trips has, after careful consideration, been adopted.

The question of the advisability of members delivering lectures on medical subjects to lay audiences was brought before the Council, and as it did not consider that it had any power, from an ethical standpoint, it was resolved to get an expression of opinion from the general secretary on the subject; but up to the present no reply has been received to the Council's letter.

The question of attending and granting certificates of death to persons who have been treated by unregistered practitioners was brought before the Council, and it was to have been discussed at the November meeting, but owing to the poor attendance and the lateness of the hour the discussion was postponed, and the Council has held the matter over until our March meeting.

Owing to representations from the Victorian Branch for an increase in our subscription, after mature consideration, your Council decided to accede to its request, so that our subscription to that Branch is now £1 17s 6d per member.

It is with very great pleasure that we have to acknowledge considerable additions to our library, through Drs. Cunningham, Mitchell and Morrison, and Mrs. Pinnock and Miss Radcliffe.

A number of excellent specimens were exhibited by Drs. Lidwill, Martin and Salmon, and our best thanks are due to the first-mentioned gentleman in so carefully preparing the specimens.

There has been an increase in the number of original contributions, and the papers deserved a much freer discussion than the members gave them. We hope that during this present year members will remedy this defect, and make each paper a subject of animated discussion, so that the writer may feel his labour has been of some use to his *confrères* as well as to himself. The original contributions were:—"Charts of Animal and Vegetable Kingdoms," "Specimens and Paintings of Plants," "Rough Models of Animal and Vegetable Kingdoms," J. F. Usher, M.D.; "Sarcoma of Superior Maxilla," C. H. W. Hardy, M.B., Ch.B.; "Scirrhus of Breast," R. Scott, M.B., Ch.M.; "Athetosis," J. K. Richards, M.D.; "Hæmorrhage in the Newly-born," E. Champion, M.B., Ch.B.; "Some Surgical Experiences During the South African War," Major W. B. Nisbet; "Some Cases of Hysterectomy," J. T. Mitchell, M.D.; "Some Notes on Eclampsia," C. H. Courtney, M.B., Ch.B.; "Relationship of Tuberculosis to Miners' Disease in Ballarat," J. M. Gardiner, M.B., B.S., D.P.H.

RECEIPTS AND EXPENDITURE FROM JANUARY 22ND, 1903, TO JANUARY 28TH, 1904.

Dr.	£	s.	d.
To Subscriptions to Victorian Branch	71	5	0
,, Printing and stationery	2	12	4
,, Wreaths	2	12	6
,, Petty cash	3	4	1
,, Bank charges	0	10	0
,, Balance in Union Bank	9	10	10
	£89	14	9

Cr.	£	s.	d.
By Balance, January 22nd, 1903	7	16	9
,, Members' subscriptions	79	16	0
,, Interest fixed deposit	2	2	0
	£89	14	9

Fixed deposit receipt in Union Bank .. £70 0 0

Audited and found correct.

R. A. CUE, } Hon. Auditors.
W. E. F. SMYTH, }

H. R. SALMON, Hon. Treasurer.
E. CHAMPION, Hon. Secretary.

January 22nd, 1904.

Drs. CHAMPION and R. SCOTT moved—"That the annual report and balance-sheet as printed be received." Carried.

The report and balance-sheet were adopted, on the motion of Drs. CUSSEN and GARDINER.

The retiring president (Dr. J. F. USHER) then read an address on the "Physician in the Scriptures," in which he quoted all examples of healing met with in the Bible, detailed the various accidents, and enumerated the drugs which were used for healing purposes.

At the conclusion, Drs. R. SCOTT and CUSSEN moved a hearty vote of thanks to the president for the very original and exhaustive address, which had necessarily occupied years of patient study of the Scriptures.

Dr. USHER responded suitably, and then installed Dr. J. T. Mitchell in the presidential chair. The latter received a very cordial reception, and thanked the members for the honour conferred on him.

The following office-bearers were then elected:—vice-president, T. A. Wilson, M.B., Ch.B.; hon. treasurer, H. R. Salmon, M.B., Ch.B.; hon. secretary, E. Champion, M.B., Ch.B.; members of council (2), W. B. Nisbet, M.B., Ch.B. (Edin.), H. V. Bennett, M.B., B.S.

Drs. CHAMPION and CUSSEN moved—"That the thanks of the Branch are due to the hon. auditors, Messrs. Cue and Smyth, and that they be re-elected." Carried.

Drs. WILSON and McGOWAN moved—"That accounts to the amount of £76 0s 1d be passed for payment." Carried.

Dr. J. K. RICHARDS gave notice of motion—"That by-law 10 be altered by substituting the word 'Thursday' for 'Saturday' in the first paragraph."

The meeting then closed, and the members were entertained at supper by the retiring president.

REVIEW OF CURRENT MEDICAL LITERATURE.

MEDICINE.

Post-Typhoidal Myositis of the Rectus Abdominis.

Scannell (*Boston Medical and Surgical Journal*, November, 1903) describes a case of this nature which he believes to be unique in the records of the subject up to the present time. A male, aged nine years, was admitted to the Boston City Hospital in May, 1901, with the diagnosis of typhoid fever. This diagnosis was confirmed by the Widal reaction and the low white cell count. The disease was a serious one, and the patient had several hæmorrhages. Nine days after admission he developed varicella. Twenty-seven days after admission furunculosis occurred mainly on the anterior abdominal wall, upper thighs, and buttocks. Cultures from these showed no bacilli of typhoid, but staphylococci and streptococci. Twelve days later he developed an ischio-rectal abscess, which was opened. The pus from this did not contain any typhoid bacilli. He was discharged well a little over two months after admission. Five days later he was brought back to the hospital with a history of fever and chills, diarrhœa, and gradually increasing pain in the hypogastric and right iliac region. On admission, beside the general febrile symptoms, his abdomen was found to be distended. There was involuntary spasm more or less general, but especially marked in the lower right iliac region; over this area there was dulness on percussion. Exact palpation was impossible on account of the spasm and excessive tenderness, but there was felt a fairly definite mass occupying the right iliac region. Movements of the diaphragm and extension of the thighs caused increased local pain. The diagnosis of acute perforative appendicitis was made, and immediate operation was decided upon. On abdominal section, the appendix was found to be normal, and there was no peritonitis. Exploration of the intra-abdominal surface of the anterior belly wall revealed an ovoidal, indurated, non-fluctuant, extra-peritoneal thickening of the right rectus muscle in its lower third, extending from just below the umbilicus to just above the symphysis pubis. In the immediate neighbourhood of the swelling in the rectus there was apparently a slight involvement of the transversalis and internal oblique muscles. After operation the induration of the muscle gradually subsided, but on the thirteenth to the sixteenth day there was a return of all the symptoms again, with a swelling in the same situation From this time there was a gradual improvement, and on the 27th day he was discharged well and has remained well ever since. The author remarks that although myositis as a complication or a sequela of typhoid fever is a fairly well recognised condition, yet investigation of the literature shows an entire absence of any recorded case of involvement of the rectus abdominis. Osler, in a recent series of cases of typhoid fever (829 in all) mentions the occurrence of myositis either as a complication or a sequela only once; and Keen, in over 900 cases, did not find the condition once. The close resemblance of the symptoms in this case to perforative appendicitis is also worthy of note.

Chronic Pancreatitis.

Greig (*Scottish Medical and Surgical Journal*, December, 1903) records a case of this disease completed by post-mortem examination. The patient was a single woman, aged 49 years. She had been suffering from jaundice for nearly three months. Her family history was unimportant, but her personal history was good. Her present illness was ushered in 11 weeks before being seen by an attack of shivering, followed by vomiting and subsequent development of jaundice. The vomiting recurred at frequent intervals; her stools were pale, free from bile, and the urine very dark. The jaundice increased, and she lost flesh considerably. On examination, no enlargement of the gall-bladder could be made out, but there was some tenderness in the epigastrium, a little to the right of the middle line. The dagnosis of a stone impacted in the common duct was made, and the abdomen was opened. The gall-bladder was found to be rather distended; it could be emptied easily on pressure, but could be at once filled up again. The liver was normal. In the head of the pancreas there was a hard, slightly irregular mass, which was taken to be a carcinoma of the pancreas. A cholecystenterostomy was done, and the abdomen closed. The patient died five days later from bronchitis. On post-mortem examination there was no peritonitis, and the tumour at the head of the pancreas had disappeared. On further examination of the removed parts, there was found some irregularity of the mucosa on Vater's ampulla, suggesting ulceration; but on subsequent microscopical examination no sign of malignant disease was found. There were no gallstones. The canal of Wirsung was dilated throughout its whole extent to so large an extent that it could take the little finger laid in any part of its course. This dilatation of the duct was very striking, and, indeed, formed the first stage of a retention cyst of the pancreas. The explanation of the condition which was found was apparently that a gallstone, passing from the cystic or hepatic ducts, had been caught at the exit of the common duct on Vater's ampulla. Here it had absolutely blocked the discharge of bile, and at times the pancreatic secretion. It is, however, possible that the primary lesion was not a gallstone, but a pancreatic stone, which, becoming dislodged, had stuck in the opening of exit and so blocked the common duct as well. The absence of previous colic, and the sudden onset of the jaundice with at the same time absence of any signs of dilatation or recent injury of the gall ducts, favour this idea. The amount of pathological change in the pancreas, and the normal appearance of the gall-bladder and bile ducts, strongly suggests that the pancreas was primarily diseased. The disappearance, after operation, of the hard mass in the head of the pancreas supposed to be a carcinoma, suggests that some of the cases of supposed carcinoma of the stomach which have been operated upon, and in which, subsequently, the tumour has disappeared spontaneously, may be really of the nature of chronic pancreatitis.

Albuminuria Accompanying Diabetes.

F. W. Pavy, in two articles in the *Lancet* (November and December, 1903), discusses the various conditions under which albumin appears in the urine in cases of diabetes, and the significance to be attached to it. From the association of albuminuria with diabetes it may be assumed that some condition or other connected with diabetes tends to affect the kidney, and to lead to the production of albuminuria; but the latter may be developed in the diabetic patient from the causes which lead to its development in the non-diabetic, and thus constitute a purely independent affection. Hence albuminuria may be either concurrent or consecutive with diabetes. In the former case the albuminuria presents itself as a concomitant of Bright's disease which may happen to become independently developed during the existence of diabetes. When such an event occurs, a different series of phenomena is met with from that following the advent of albuminuria as a consecutive condition upon the diabetes. With Bright's disease developing in this way, the diabetes may be found to decrease or even disappear. On the contrary, the albuminuria may disappear on the establishment of more favourable conditions as regards the diabetes. The cause of the consecutive albuminuria occurring in connection with diabetes is a toxic influence of the sugar abnormally present in the blood upon the kidneys. That the kidney should yield to the toxic influence more readily in some case than in others is not surprising when one considers that the same phenomena are met with in connection with other toxic agents, such as alcohol. In cases where diabetes mellitus has existed for a long time the effect upon the kidney may be such as to lead to a certain amount of textural change being perceptible in the form of more or less interstitial overgrowth and abnormality implicating the epithelial cells of the secreting tubules, but the most important fact in connection with the relation between albuminuria and diabetes is that with the advent of diabetic coma, albuminuria attended with a profuse discharge of casts, occurs as a concomitant phenomenon, and the discharge of casts may be such as to give rise to a light fluffy deposit, forming a conspicuous sediment of sufficient amount to prevent escape from attention. This deposit is really a sediment of casts possessing a somewhat characteristic microscopic appearance. The casts are mostly short and wide, and often at their ends look as if broken off. They have a distinct contour and are of a granular structure. The deposit of casts is of diagnostic value, foreshadowing as it does the supervention of coma. Whether casts have been discovered before or not, it is the sudden onset of casts sufficient to form a visible sediment which is suggestive of impending danger. The albumin does not stand in proportion to the casts; ordinarily it is not in large amount. With the condition of urine described, the kidney gives strongly marked evidence of being the seat of morbid change. The acetone series of products which constitute the source of the coma evidently exert a pernicious influence upon the organ. When the acetone series of products are associated with the sugar, experience shows that the proneness to the appearance of albumin is greatly increased, a circumstance not to be wondered at seeing that there is now an additional toxic agent at work. The appearances found in the kidneys where death has taken place from diabetic coma correspond with those produced by a renal irritant poison. The epithelium of the convuluted tubes is greatly swollen, in some parts hyaline, in others appearing as a confused granular mass, which was very difficult to stain, and shows few nuclei. The author concludes with some observations on the bearings of alcohol on the albuminuria occurring as an accompaniment of diabetes. Under the excessive use of alcohol the damage done to the kidneys by the toxic effect of the sugar in the urine becomes intensified. The condition is much aggravated, and the disease is greatly accelerated. Peripheral neuritis may arise from the effects of both alcohol and diabetes, but its development in the diabetic is without doubt much promoted by the intemperate use of alcohol. There are, on the contrary, no grounds for supposing that the temperate use of alcohol is prejudicial.

Pneumococcic Arthritis.

Howard (*Johns Hopkins Hospital Bulletin*, November, 1903) reports three cases illustrative of the fact that lobar pneumonia is not a purely local disease of the lungs, but a general acute infection. The first case was that of a male, *æt.* 42 years, admitted to hospital on the fourth day of the disease, complaining of fever. On admission he was found to have some slight signs of acute lobar pneumonia on the right middle lobe. On the seventh day he developed pericarditis, and some arthritis of the right shoulder joint. On the tenth day some arthritis of the right ankle-joint appeared. Aspiration of the joint on the next day yielded 2 c.c. of turbid fluid, in which typical pneumococci were found both in smear preparations and in cultures. Post-mortem examination revealed very extensive lesions, including peri-, endo- and myo-carditis, as well as meningitis and the arthritis. The second case was that of a male, aged 79, admitted on the third day of the disease with lobar pneumonia. He developed arthritis of the left shoulder joint on the seventh day, of the right knee joint on the eighth day. left knee on the ninth day, and he died on the same day. Post-mortem, the pneumonia was confined to a small area at the apex of the right upper lobe. The left shoulder and right knee-joint contained a large amount of purulent fluid, smears from which showed capsulated diplococci. The left knee-joint showed only a small amount of clear fluid post-mortem. The third case was that of a woman, *æt.* 69 years, who was transferred from the insane pavilion to the hospital, on account of heart disease and pneumonia. Some arthritis of the right knee developed on the same day as the pneumonia. The pneumonic consolidation only involved a small area at the apex of the right lung. The fluid from the knee-joint showed the presence of the typical capsulated pneumococci.

Copaiba Rash Simulating Scarlet Fever.

It is well known that copaiba taken in large doses may cause the appearance of a brilliant red rash like scarlet fever; but when such a rash is accompanied by the other signs and symptoms suggestive of scarlet fever, it becomes a difficult and important matter to be sure of one's diagnosis. McWalter (*Lancet*, December, 5th, 1903) describes the case of a young man, aged 22 years, who had been taking 20 minims doses of copaiba for gonorrhœa while it was still in the inflammatory stage. When seen he presented a copious rubelloid eruption, a temperature of 102° F., which only fell to 101° by the next day, after he had ceased to take the medicine and remained in bed. He had also some congestion of the tonsils, and felt deadly sick. After three days a copious desquamation set in, foliaceous flakes of epithelium were shed, and regular casts of the fingers could be removed. There was also albumin in the urine, which, however, quickly passed off. The patient was convalescent in four or five days, though the desquamation continued somewhat longer.

PATHOLOGY.

The Action of Human Gastric Juice on the Tubercle Bacillus.

In a paper in the *Riforma Medica*, June 24th, 1903 (translated in the *Journal of Tuberculosis*, October, 1903), Ferrannini states that the possibility of a tuberculous infection through the digestive tract, and the ability of the gastric juice to destroy the virulence of the tubercle bacillus, are elements in one of the most disputed questions in the field of tuberculosis. The author remarks that in the various experiments instituted towards the solution of this question the observers have not sought to place themselves in the most natural conditions, and the results have been correspondingly uncertain, contradictory, and of no value in clinical work. In 1884 Sormani noted that the gastric juice of some animals does not possess the power of destroying the virus of tuberculosis, that the latter is very resistant to the action of the artificial digestive juices, but that it can be destroyed by the gastric juice of other animals. The author has, accordingly, in his experiments, used natural gastric juice. He determined the total acidity of the gastric juice, and also the amount of free hydrochloric acid. He then prepared two series of sterilised test tubes, each containing five c.c. of gastric juice. In each of these series there was one test tube with natural gastric juice, another with boiled gastric juice, a third with its contents of free hydrochloric acid neutralised, and a fourth in which the amount of hydrochloric acid was increased to 2 parts to 1000; in other words, to the maximum limit which it can reach under physiological conditions. To each one of these two series of test tubes a fifth tube was added, containing five c.c. of sterilised water. To each tube was added one or two fatal doses of culture of human tubercle bacilli, according to the number of guinea-pigs to be inoculated. The tubes were then placed in an incubator at 37° C. and were left there, the first series for one hour, the second series for two hours. The tubes were then removed, and their contents were accurately neutralised, and this material used for inoculating the peritoneum of guinea-pigs. The results were uniform; in all the experiments no guinea-pig escaped infection with tuberculosis. Among the guinea-pigs inoculated with gastric juice which contained 2 to 1000 free hydrochloric acid, and which was allowed to remain in the incubator in contact with the bacilli of tuberculosis for two hours, a number died later than the others, or presented less pronounced lesions at the autopsy. But the experiments showed that the human gastric juice, even when it contains two parts in a thousand of free hydrochloric acid, cannot protect the gastro-intestinal tract from a tuberculous infection after an exposure of one or two hours. There was no reason for protracting the action of the gastric juice beyond two hours, and by so doing one would destroy the natural conditions of digestion, since normally a substance does not remain in the stomach for 10 or 12 hours, or longer. The author suggests that the reason why a primary intestinal tuberculosis is difficult to produce may be that there is only a slight susceptibility on the part of the intestine or because of some special action of the intestinal juices.

The Agglutination of the Pneumococcus with Normal and Immune Sera.

Wadsworth (*Journal of Medical Research*, October, 1903) describes a method he has adopted in the course of some experiments on pneumococcus infection in the immunised rabbit to obtain some criterion of the degree of immunisation developed in the animal. A pepton broth made from meat infusion, carefully neutralised before boiling, and allowed to stand and absorb oxygen, was found to be the best medium for the growth of pneumococcus. In a flask containing 200 c.c. the maximum growth is usually reached in from 24 to 36 hours. At this stage the culture is centrifugalised, clear fluid decanted, and the sediment shaken with about 15 c.c. of 85 per cent. salt solution. The few clumps broken up sink rapidly, leaving a dense, finely-divided suspension of pneumococcus cells less than 48 hours old. Dilutions with the sera to be studied may then be made in small slender tubes, and observed from 12 to 18 hours at 37° C. The more marked reactions may be complete in five or six hours or less, but 12 or more hours are often required to bring out the more delicate tests. The author has studied the agglutination of the pneumococcus in the blood serum from various normal animals and from a large number of specially immunised rabbits. The normal serum of the rabbit always failed to agglutinate the pneumococcus cells. The normal blood sera of cats and dogs also failed to agglutinate. Ascitic fluids failed to agglutinate in dilutions of 1 to 15; but normal human sera gave reactions in dilution up to 1 in 10 in less than 18 hours; 1 to 30 failed to agglutinate dilutions. The author also records some experiments on the agglutinative action of the blood serum from pneumonia patients on pneumococci, the agglutinative action of pneumococcus serum on streptococci, the agglutinative action of streptococcus serum on pneumococci; also some investigation of the pneumococcus precipitin reaction. He summarises his conclusions as follows:—(1) That peculiar growth phenomena occurring in pneumococcus cultures in serum are not reliable tests of the presence of agglutinins or other adaptive substances. (2) That the presence of these substances in very active sera may be demonstrated by the usual agglutination methods, but that as a delicate or practical routine procedure this method was a failure. (3) That by concentrating the pneumococcus cells in an isotonic solution, as by centrifugalising broth cultures and shaking the sediment with a small quantity of salt solution, a practical and accurate method is available for the precise study of the pneumococcus agglutination reaction. (4) That by this method an agglutinative action, heretofore not detected, has been demonstrated in the blood serum of various normal animals and in certain specifically immune sera. (5) That it has been possible to obtain the pneumococcus precipitin reaction, not only with cultures cleared by normal bile, as did Neufeld, but with filtered salt solution extracts of the pneumococcus cell. (6) Finally, that precipitin reactions, heretofore not described, have been demonstrated with the blood serum of various normal animals and with certain immune sera.

Large Tuberculous Masses in the Heart.

Tuberculous pericarditis and endocarditis, as well as miliary tubercle in the heart muscle are now well recognised pathological lesions. But the occurrence of large tuberculous masses in the myocardium is exceedingly rare, and Stephani (*Beitrage zur Klinik der Tuberkulose*, vol. 1, No. 4) records three cases of this nature, the specimens from which he received from the Pathological Institute in Heidelberg. In all of these there were large tuberculous masses in the myocardium. In one there was also some diffuse tubercular infiltration and miliary tubercles under the endocardium. The author discusses the question whether these were cases of primary tuberculosis of the heart or secondary deposits. The wide general distribution of the disease in all the organs of the body strongly suggests the spread of the disease through the blood stream directly infected from the tubercular foci in the heart, and there seems no *a priori* reason against such a tubercular deposit in the heart being primary, although the number of possible cases of primary tuberculous myocarditis on record is only three.

PÆDIATRICS.

Chronic Post-Diphtheritic Laryngeal Stenosis as a Cause of Persistent Intubation of the Larynx.

Berg, Henry W. E. (*New York Medical Record*, August, 1903). When intubation was first introduced by O'Dwyer in the treatment of diphtheria, the object was to keep the larynx patent while its lumen was blocked by membrane. This period lasts on an average four days (*i.e.*, since the antitoxin treatment came in). Cases, however, occurred in which intubation had to be repeated from time to time, evidently due to permanent pathological changes taking place, which led to stricture; again, cases occurred in which the tube was soon coughed up, but such urgent symptoms of dyspnœa occurred that the tube had to be rapidly put back. These last cases are due to a chronic laryngeal paralysis. Persistent tube cases can, there fore, be divided into two classes: 1. Those due either to ulceration induced by the intubation tube or to injury produced by the operator in intubing or extubing. 2. Those due to paralysis of the vocal cords, whether temporary or permanent. As to the frequency of these cases, out of 578 intubation cases treated in the Willard Parker Hospital, 221 recovered, *i.e.*, 38 per cent.; total number of persistent tube cases, 17. The duration of time the tube was in varied from 2½ months to 18 months. These cases are much more frequent than they used to be before antitoxin, the reason being that such severe cases almost invariably died. This condition has attracted much attention on the Continent of Europe especially. It must be remembered that the tube must necessarily press pretty firmly on the mucous membrane of the larynx and trachea—the mucous membrane being compressed between the metal tube on the one side and the rigid cartilage on the other; hence pressure sores must necessarily occur in cases in which the tube has to remain in the larynx longer than usual. This ulceration varies in severity, from slight abrasion of the mucous membrane to actual destruction of the cartilage, followed by abscesses in surrounding soft parts and purulent infection of the mediastinum. The most common seat of ulceration is the anterior wall of the trachea below the circoid cartilage, caused by the lower end of the tube moving up and down against the trachea; the next most common situation is above the circoid cartilage, over the lateral and anterior wall of the larynx; this is due to the pressure and rubbing of the retention swell; the next is under the surface of the epiglottis. The most important of all these is that above the circoid, laterally, because this is the point of entrance of the recurrent laryngeal nerve on each side; a pressure sore here produces paralysis of the motor function of the nerve. Paralysis of the vocal cords is the cause of the second class of persistent tube cases. The cases on which this paper is based have been treated by persistent intubation. Of 14 cases in which the treatment has been completed, five have died and seven have been discharged cured, and two are still under treatment.

The Borderlands of Diphtheria and Scarlet Fever.

Biss, Herbert (*The Lancet*, November, 1903), says that at the present time there is too great a tendency to place all cases of illness into distinct groups or classes, leading to the ignoring of any cases that are atypical, and to the overlooking of those that do not conform to the standard type. He discusses in this paper some of those conditions which lie between scarlet fever and diphtheria, and which may conveniently be called the tonsillitis group. He first of all records a case of scarlet fever, in which the only rash observed was a blotchy, indefinite erythema, chiefly on the limbs; this appeared on the third day, and disappeared on the fifth. This case was diagnosed as tonsillitis, but subsequent general peeling showed its true nature. This patient was a nurse in a fever hospital, and was under observation from the beginning. These anomalous rashes are frequently associated with every form of tonsillitis; such rashes vary from a little mottling of the chest to the most intense general blush, and frequently scarlet fever has been suspected where it did not exist. Ordinary cases of tonsillitis have to be distinguished from cases of scarlet fever without eruption. The writer long had grave doubts about the existence of such a condition, but has seen too many cases to doubt it any longer. Such cases are generally sent to the hospital as diphtheria, and are very apt to inaugurate an outbreak of scarlet fever among the diphtheria patients; its recognition is therefore a matter of considerable importance. It is more apt to affect the very young and adults than those of an intermediate age, when scarlet fever is more usual. Such cases shade off gradually into another condition, which may be called "ulcerative tonsillitis." Their chief character is the presence of a large ulcer or ulcers on the tonsils and surrounding structures, some of considerable extent and depth; they may lead to severe destruction of the throat tissues and infection of the system by the pyogenic cocci. The general symptoms rather resemble scarlet fever than diphtheria. It may be accompanied by eruptions of widely varying nature, bearing no distinctive character, and quite unlike the rash of scarlet fever. The throat appearances are very like those of diphtheria, but the course followed is very different, as it is most unusual to find any ulceration in diphtheria. The writer concludes by saying that a real combination of scarlet fever and diphtheria, both in the acute stage, is very rare, but undoubtedly does occur occasionally.

The Bacillus of Dysentery, with special reference to its Ætiological Relationship to the Summer Diarrhœa of Children.

Flexner, Simon (*Johns Hopkins Hospital Bulletin*, November, 1903). In 1898, Shiga reported his studies of Japanese dysentery. In order to be sure that the organism he described was actually the cause, he used the agglutinative test. Not all dysenteries are due to the Shiga bacillus, *e.g.*, the amœbic type is apparently an independent infection. Epidemics of dysentery are doubtless all due to the Shiga bacillus. Local outbreaks and many of the sporadic cases are due to the same bacillus. The organism is very like the typhoid bacillus. The Shiga bacillus is not mobile, and the agglutinative reaction serves to differentiate it. The number of bacilli varies with the nature of the stools, most being found in the bloody portions; the clumping reaction may be delayed, or may fail altogether. It is safe to assume that as many as 43 out of 50 cases of summer diarrhœa are due to this bacillus. There is probably some slight difference in organisms isolated in different cases. The clumping reactions are somewhat irregular, as are also the chemical reactions in sugar media. Immunisation against the organism is possible, and the outlook for a protective serum is good. To summarise: the acute dysentery of adults and summer diarrhœa in children are both due to the same cause, viz., the bacillus dysenteriæ of Shiga.

Dr. William Pierce, formerly medical officer of health at Watson's Bay, died at London on December 31st, of pneumonia.

CORRESPONDENCE.

London.

(FROM OUR OWN CORRESPONDENT.)

International Congress of School Hygiene—Sleeping Sickness—Royal Commission on Arsenical Poisoning—Illness of the German Emperor—Medical Education in the Metropolis—Lord Iveagh's Gift to the Dublin Hospital—The Herter Lectures—The University of Liverpool—Gelatine Injections—The King's Sanatorium.

THE first International Congress ever held in connection with the hygiene in schools will meet at Nuremberg from April 4th to 9th, 1904. Communications are already announced from the following well-known authorities :—Professor Cohn, of Breslau ; Professor Axel Johannesen, of Christiania ; Dr. Le Cendre, of Paris ; Dr. Sickinger, of Mannheim ; Professor Liebermann, of Budapest ; Professor Hueppe, of Prague ; and Professor Eulenberg, of Berlin. Communications from all who are interested, or who desire to take part in the work of the Congress, should be addressed to Herr Max Versen, Editor-in-Chief of the *Frankischer Kurier*, Nuremberg.

There has just been published by the Foreign Office a White Paper containing Colonel Hayes-Sadler's report on the Uganda Protectorate for the year ended March 31st last. In the course of this report, the Commissioner gives the following account of the measures taken to cope with sleeping sickness :—"This disease, which is well known in West Africa, was first noticed in Uganda by the brothers Alberu and A. Howard Cook, of the Church Missionary Society, about April, 1901. Dr. A. Howard Cook's notes were published in the *Journal of Tropical Medicine* of July 15th, 1901, and February 15th, 1902. By July, 1901, some seven cases had come under treatment at the hospital in Namirembe. Inquiries elicited the fact that the disease was common in parts of Busoga, and by the close of that year it had spread widely, and carried much mortality in Chagwe, in Uganda, and in the lake portions of Busoga. Early in 1902, Dr. Hodges was deputed specially to investigate the most infected districts, and the interesting report he drew out at the close of his investigations was separately printed and circulated for the information of our medical officers. It was evident from the report that the disease, the true nature of which could not be ascertained, was one with which it was beyond the power of our medical department to deal. I accordingly asked that the Protectorate might be given the services of a specialist from the Tropical School of Medicine ; in the meanwhile arrangements had already been made with the Royal Society to despatch a special commission of experts to study the disease on the spot; and in July the commission, composed of Drs. Low, Christy, and Castellani, arrived, and a laboratory was fitted up in Etebbe for their use. As a result of their investigations, they succeeded in excluding *Filaria Perstans* from any causative relation with the disease. Our principal medical officer, Dr. R. U. Moffat, C.M.G., had already arrived at the same conclusion. Later on Dr. Castellani succeeded in isolating a streptococcus, which he regarded at first as the cause of the disease. Acting on the investigations so far made, Dr. Low advised segregation, and arrangements were made for the formation of an isolation settlement on one of the Sesse islands. The Royal Society, however, did not consider that the results obtained were entirely conclusive, and they advised that further investigations be undertaken before any definite line of action was decided on. Accordingly in January last Colonel Bruce, R.A.M.C., F.R.S., whose services were lent by the War Office for the purpose, was despatched with a full staff to make further search into the cause and nature of the disease." The result of these investigations was strongly confirmatory, if not conclusive, of the theory that sleeping sickness is a human tsetse fly disease. The distribution of the fly and of the disease is suggestively co-extensive, and is thus referred to by the Commissioner :—"The fly, and therefore also the disease, have a very remarkable distribution, being confined to the lake shore and to the islands. When the distribution of the fly is more fully worked up it will become a question as to how far the natives may be removed from infected into healthy localities. This has been done already to some extent by the natives themselves and by the industrial mission which had been established on the lake shore. One practical point made out is that there is no danger of infection spreading to places in which the tsetse fly is not found, though there may be some danger in bringing natives from healthy districts into the sleeping sickness area, and inquiries are being made upon this point. During the year the disease, which had hitherto been confined to the lake regions of Chagwe and Busoga, spread south-west to the shore districts of Buddu, and east to Kisumu, in East Africa, carrying consternation and death along its path. Except in Busoga, where the disease has appeared as far as 30 miles inland, its ravages appear to be confined to an area of some ten miles from the Victoria Nyanza. Its effects have been particularly felt in the islands such as Sesse Buvumma, which are rapidly becoming depopulated. So far, no remedy has been discovered, and all who are taken with the fell disease are doomed to die." The report contains nothing bearing upon the liability of Europeans to the disease, but evidence in regard to this question has recently been given at home by Sir Patrick Manson, who has recorded an interesting case of trypanosomiasis followed by sleeping sickness. The patient was the wife of a missionary stationed at Mosembe, Upper Congo, who, about 14th August, 1901, was bitten on the left leg by, presumably, a tsetse fly. The bite inflamed, and a fortnight later she experienced the first of a long series of recurring attacks of fever. About the same time a patchy, ringed, erythematous eruption appeared on the skin, and both liver and spleen became enlarged. She returned to England in December, 1901. In May, 1902, she had an attack of phlebitis in the left leg. In October, 1902, Sir Patrick diagonised trypanosomiasis, and subsequently Dr. Daniels found trypanosomes in the blood. She remained in hospital for about five months, and then went to the seaside, where her health seemed to improve. At a subsequent period she relapsed, and the febrile attacks became more frequent. About the middle of October last she was compelled to take to her bed almost entirely, and then, for the first time, began to evince a tendency to drowsiness. Simultaneously the trypanosomes became more abundant in her blood. She gradually got worse, the drowsiness increased daily, the sphincters became incompetent, bed sores formed, and she died comatose on November 26th. On post-mortem examination, microscopic evidence of meningo-eucephalitis was found, and subsequent microscopical examination revealed the extensive perivascular small mononuclear infiltration so characteristic of sleeping sickness. This is the first well-authenticated case of sleeping sickness in a European, and affords almost conclusive evidence that the trypanosoma is an important factor in the etiology of this terrible and hitherto obscure disease. In this connection it is convenient to direct attention to the first report, issued a few weeks ago, of the expedition sent to the Congo Free State by the Liverpool School of Tropical Medicine. After the arrival of the expedition it was arranged that the field of investigation should extend to Boma, Matidi, and

Leopoldville. Quarters were provided by the State, and the local doctors placed the native hospital, where there were several cases of sleeping sickness, at the disposal of the investigators. From information conveyed by a missionary, it was ascertained that last year 4000 people died from sleeping sickness in the district of Watken alone, and there was reason to fear a considerable spread of the disease. To obviate this, as far as possible, pest camps had been established in various districts by order of the Governor. The natives had acquired a dread of contagion, and refused to bring themselves in contact with a patient suffering from the malady, or to touch his effects should he die from it. The expedition requested the Government to indicate the most suitable locality for research work, and it intends later on to proceed to Matidi or whatever other place is selected and there to enter fully into a detailed investigation. Already the members of the expedition are satisfied that the Congo is the right place in which to study human trypanosomes, and they have succeeded in demonstrating the parasites in the blood of many natives who were apparently healthy as well as in that of those who had been struck down by the disease. The expedition promises to do useful work, and its next report will be looked forward to with interest.

The complete evidence taken before the Royal Commission on Arsenical Poisoning has just been published in two interesting volumes. The first volume comprises all the evidence received down to the date of issue of the Commission's interim report in 1901, and its contents relate mainly to the epidemic of arsenical poisoning which occurred in the previous year and to the question of arsenic in brewing ingredients. The second volume records the evidence and "appendix papers" received between that date and the beginning of the present month, when the Commission's final report was published. In the latter are full accounts of the scientific inquiries instituted by the Commission, including a report by their assistant commissioner and chemist on the subject of arsenic in articles of food and drink other than beer; reports on "beri-beri" in relation to arsenic; on arsenic in malting anthracites and malting fuels; on the excretion of arsenic by the hair, and on numerous other matters. Each of these reports is accompanied by a summary prepared by the secretary of the Commission giving a concise account of the inquiry and a review of the results obtained. These volumes form an important work of reference on the whole subject of arsenical poisoning in its medical, chemical and administrative aspects, and also gives a large amount of information in connection with malting, brewing and other processes of food preparation. They are fully indexed, and reference to them is further facilitated by a commendable system of marginal notes.

The *British Medical Journal* has been able, in one of its most recent issues, to make the satisfactory announcement that it has the most trustworthy authority for stating that the Emperor of Germany has completely recovered from the effects of the recent operation on his larnyx, and that there is now no fear of untoward developments. The voice of his Imperial Majesty is clear and resonant, and his general health is all that could be desired. He has shown his appreciation of the services rendered to him by Professor Moritz Schmidt by conferring on him the honour of an effective Privy Councillorship, which carries with it the title "Excellency."

The University of London has at length bestirred itself to an endeavour to establish medical education in the metropolis on a system adequate to present-day requirements. An appeal has been issued by the Senate for funds to build and endow an Institute of Medical Sciences which shall be under the control of the University. In this appeal it is pointed out that it has become impossible for each medical school to build, equip, and maintain the laboratories necessary for modern scientific teaching out of the income derived from the students. A Royal Commission has already recommended that instruction in such subjects as physics, chemistry, biology, anatomy, physiology, and pharmacology should be given, not separately in a number of different schools, but in one or more central institutions controlled by one authority. This recommendation was adopted by the Statutory Commission, and has since been endorsed by the Faculty of Medicine. The present moment is regarded by the Senate as a favourable opportunity for obtaining centralisation in the teaching of such subjects as those referred to, and they feel that, if London is to maintain the position which she has hitherto held as a centre of medical education, it is essential that money should be provided for the carrying out of their scheme. The University reminds the nation that it owes much to the efficiency of medical education, and calls upon it to realise its indebtedness to medicine and surgery by providing the material support which is so urgently required to keep their teaching abreast of modern science, and their practice up to the highest level of modern art. The establishment of a central Institute of Medical Sciences would relieve the leading hospitals of some of the burden of medical education; the space at present required for instruction in preliminary scientific subjects would no longer be required, leaving the hospitals free to devote all their accommodation and all their resources to the care of the sick and to research into the causes of disease. The appeal is amply justified, and well deserves a full and hearty response.

It may be remembered that in commemoration of the King's recent visit to Ireland, Lord Iveagh presented to his Majesty the sum of £50,000 for distribution among the Dublin hospitals. The committee appointed to carry out the wishes of this generous benefactor has just made its report to the King. Amongst others, the following institutions have already received cheques:—Mater Misericordiæ, £3500 and £300 to its convalescent home; Richmond Hospital, £2000; Victoria Eye and Ear Hospital, £2000; Meath Hospital, £2000; City of Dublin Hospital, £2000; the Orthopœdic Hospital, £1500; Adelaide Hospital, £3000; Jervis-street Hospital, £1500. The only condition attached to the donation in each case is that it shall not be used for any increase of beds.

For several years past Dr. C. A. Herter has given a course of lectures on pathological chemistry in the University and Bellevue Hospital Medical College, New York. In consequence of being appointed professor of pharmacology in the Columbia University, he has been compelled to relinquish his lectures in New York, but, with a view to perpetuating the course in his old college, Dr. Herter has generously endowed a lectureship, which is to be offered annually to one of those who have become famous in this department of science. Professor Halliburton, of King's College, London, has been selected as lecturer for 1904, and he has, it is understood, chosen for his subject the biochemistry of muscle and nerve.

In the St. George's Hall, Liverpool, the new University was ceremoniously inaugurated on November 7th, in the presence of a distinguished assembly, which entirely filled the large building. The Lord Mayor, in his capacity as chairman of the University committee, formally presented the charter of incorporation to the Earl of Derby, the first chancellor of the University, who gracefully accepted and acknowledged it. Congratulatory speeches were afterwards delivered by the mayors and deputy mayors of neighbouring towns, and by Sir Oliver Lodge, the Principal of the University of Birmingham. The chief participators in the ceremony were attired in their distinctive academic robes, and the whole scene was full of colour and strikingly picturesque. Much gratification was felt in Liverpool at the realisation of a long-felt ambition on the part of the inhabitants to have in their midst a local University.

The strongest argument which has hitherto been advanced against the subcutaneous injection of gelatine for the relief of aneurism is the danger involved of setting up tetanus. The source from which gelatine is derived and the process of its manufacture makes it very liable to contain tetanus spores, and the fatalities which have hitherto attended the use of gelatine subcutaneously have been due to imperfection of sterilisation. Some experiments recently carried on by Tuck are interesting as proving how difficult it is, in a certain proportion of cases, to destroy these spores. Out of fifteen specimens of gelatine examined, three containing tetanus germs were not sterilised after the third boiling of thirty minutes on consecutive days; eight were completely sterilised after the second boiling of thirty minutes; and five after the first boiling of thirty minutes. Only one exposure of ten minutes at 120° in the autoclave was required for the complete sterilisation of all the samples. According to Tuck, no fear of tetanus infection need be entertained if the solutions used are subjected to the action of circulating steam for half an hour. It is, therefore, an easy matter to render gelatine safe for subcutaneous use, and it is to be hoped, when this is more generally known, that opportunities for proving its curative value in suitable aneurismal cases will be more frequently taken advantage of.

On November 3rd the foundation stone of the King's Sanatorium was laid by his Majesty the King. The situation of the new sanatorium is at Lord's Common, Midhurst, on a breezy upland 500 feet above the sea level, sheltered by pine trees, and with a charming southern prospect over the South Downs towards Chanctonbury Ring. The King, on his arrival at the sanatorium, was immediately conducted by Lord Abergavenny to the pavilion, where the foundation stone was suspended in readiness for being "well and truly laid." An address was read by Sir William H. Broadbent, Bart., K.C.V.O., the chairman of the Advisory Committee. His Majesty, in the course of his reply, referred to the benefits which accrued from the open-air treatment of tuberculosis, and to his hope that the institution which was to bear his name would be the medium through which the dread malady would be arrested in many cases, and through which a knowledge of the infinite importance of fresh air and sunshine in maintaining health would be diffused among the relatives and friends of those who became its inmates. He pointed out that his sanatorium was devised not for the accommodation of the very poor, who were already provided for, but of those whose means were too slender to enable them to meet the cost of prolonged residence in private sanatoria, and of a limited number who were more wealthy. He expressed his gratification at the committee's resolution that, while no necessary comforts would be omitted which could conduce to the well-being of the patients, there would be a total absence of luxury and of expenditure of money on superfluous appointments. After the King's speech, the short religious service which is usual on such occasions was conducted by the Bishop of Chichester. His Majesty shortly afterwards returned to London. The general arrangements for the day were efficiently carried out, and the large gathering of visitors, the majority of whom consisted of members of the medical profession, had everything provided for their comfort and convenience.

South Australia.

(FROM OUR OWN CORRESPONDENT.)

The Medical Defence Association.—Dr. Hornabrook.—The Crusade Against Tuberculosis.—The Medical Congress.—Hospital Items.

An illustration of the advantage it is to the medical profession in South Australia to have such a body as the Medical Defence Association to look after its interests has lately been afforded by the negotiations which have been proceeding between the State Children's Department and the Council of the Association. In former years it had been the custom to appoint medical practitioners who were willing to act as medical officers to the destitute. They were paid so much per annum for their services. Latterly the State Children's Department has not considered the arrangement an equitable one from its own point of view; consequently those who had previously acted, and were likely to act again, were asked to attend State children at the same rate as family lodges—that is, for 6s per annum. The majority of the medical men approached replied in the affirmative. Some, however, were not satisfied, as they did not consider it fair to place a State child and a lodge child on the same footing. They urged, very reasonably, that the former might require attention from the day of its birth, whilst there was a minimum age limit in the case of the latter. The Council of the Medical Defence Association was asked to take the matter up, and agreed to do so. Mr. Gray, the head of the Government Department, met the Council in a most conciliatory manner, and acknowledged the unfairness of the proposal when it was pointed out to him. The negotiations resulted in the following agreement:—1. That State children under the age of seven shall be attended at the rate of 10s per annum. 2. That State children over the age of seven shall be attended at the rate of 6s per annum. 3. That the above rates shall apply only to those children living within a radius of three miles. Outside this limit 5s a mile shall be charged.

It will be observed that the terms secured are much better than the 6s. rate which was originally offered.

Dr. Rupert Hornabrook, an Adelaide graduate, who served with distinction throughout the siege of Ladysmith, and who took part in the famous fight on Waggon Hill, has had a long time to wait for any recognition of his services. The London *Gazette* of December 4 contains an addendum to the despatch from Lord Roberts, dated April 2, 1901, giving a list of names which should have been included among those brought to notice "for meritorious services performed." Lieutenant Hornabrook is the only medical officer named.

A good deal of public interest is still being shown in the modern crusade against pulmonary tuberculosis. Two homes for the open-air treatment of the disease in its early stages exist. "Kalyra" is a public institution, situated in the hills a few miles from Adelaide; "Nimyara," Dr. Gault's sanatorium, is in the same neighbourhood. The treatment in the majority of the cases has been of the greatest benefit to the inmates. It has been felt, however, that something should be done for the sufferer who can no longer hope to be cured. It is a well-known fact that hope springs eternal in the consumptive's breast, so that it is possible that the public solicitude may be wasted on the patient whom everybody but himself considers incurable. Nevertheless, the Government propose to turn the vacant Lunatic Asylum, which stands in grounds adjoining the Botanic Gardens and Park, into a home for such cases. It is to be regretted that this decision should have been arrived at. It would have been more in accordance with modern sanitary ideas to have had the home outside the precincts of the city. There are many, too, who favour the demolition of the old Asylum buildings and the incorporation of the grounds with the Botanic Gardens and Park.

Some progress is being made in the arrangements for the Medical Congress which is to be held in Adelaide in 1905. Drs. Mainwaring and Johnson are working hard at the Pathological Museum, and hope to make it well worth a visit by those who attend the Congress. Dr. Lendon, who has just returned from India, was deputed to extend an invitation to the profession there to attend what promises to be a most successful gathering.

The alterations in the operating block at the Adelaide Hospital are now in progress. It is intended to bring everything thoroughly up to date. Hannam & Co., of Sydney, are putting in all the necessary fittings.

The Children's Hospital Board intends to spend several hundred pounds on electric lighting and a hot water service throughout the hospital. The Hon. J. H. Angas has given £300 for this purpose. At both the Adelaide General Hospital and the Adelaide Children's Hospital it is impossible to operate according to aseptic as opposed to antiseptic principles, with the present arrangements.

The Roman Catholic Sisterhood, which conducts the North Adelaide Private Hospital, proposes to build a large modern hospital on the site of the present one. It is intended to provide for non-paying as well as paying patients.

An isolation ward is being built at the Queen's Lying-in-Home. The Home, which was founded by Lady Tennyson, in memory of the late Queen, has proved a great success, and is being more and more used by the class of poor married women. It also provides medical students with cases, and the lecturer on obstetrics with material for clinical instruction.

The level streets of Adelaide, and the easy gradients of the suburbs, combined with the wretched tram service, have tended to popularise the motor car. The medical profession is commencing to discard the horse in its favour. Four at least of the city practitioners drive their own cars, and several others contemplate getting them.

BORDER MEDICAL ASSOCIATION.

(*To the Editor of the Australasian Medical Gazette.*)

Dear Sir,—We are trying to form a Border Medical Association in these parts, and, in fact, have done so at a meeting held at Chiltern on January 20th. It would be of much use to us if you could give a brief notice of the event in the GAZETTE.

On account of the bad weather and other things the attendance fell below expectations, but there were nine border medical men present from Albury, Chiltern, Rutherglen and Corowa, while apologies were received from many, and promises of support from quite a large number. The inaugural meeting will be held in Chiltern in March, when the president will deliver an address.—I am, etc.,

Corowa, N.S.W., WILLIAM H. LANG.
January 22nd, 1904.

THE PRESERVATION OF RUBBER GOODS.

(*To the Editor of the Australasian Medical Gazette.*)

Dear Sir,—Perhaps the following hints about preserving rubber goods may save your readers much money:—

Tubing, syringes, stomach syphons, catheters, etc., should all be kept under water. The rim of the face-piece of your ether apparatus should be filled with water—not air. The water tends to preserve it. In fact, all rubber goods will last for years if kept under water in as cool and as dark a place as possible.—I am, etc., ECONOMY.

February 5th, 1904.

THE BATTLE OF THE CLUBS.

The Balmain Dispensary.

THE Sydney daily press appear to have taken advantage of the "dull season" to attempt to create some newspaper correspondence upon the relations of the friendly societies and their medical officers, and the present dispute at the Balmain Dispensary has furnished a text upon which to make some very inaccurate and misleading statements.

As some of our readers are most probably entirely ignorant of the history of the dispute at Balmain, we shall give a plain statement of facts.

As our readers are aware, the New South Wales Branch of the British Medical Association has taken a determined stand against the Australian Natives' Association as a medical benefit society, and that attitude has been assumed and is still maintained after most careful consideration of all the facts.

The Balmain branch of the A.N.A. became affiliated with the Balmain Friendly Societies' Dispensary, and the medical officers of the latter were therefore called upon to attend members of the A.N.A. Upon representations of these facts a conference was held between delegates of the Council of the N.S.W. Branch of the B.M.A. and the Balmain Dispensary. The latter asked for twelve months' time to enable them to take such steps as might be necessary to enable them to expel the A.N.A. This was conceded. At the end of the twelve months the committee of the Balmain Dispensary were asked whether any steps had been taken in accordance with the agreement arrived at in conference. Although several applications were made to the committee, no satisfactory answer was received by the Council of the B.M.A., and the latter body is still officially uninformed that the Balmain Dispensary committee have given to the A.N.A. six months' notice to sever their continuance with the Dispensary, though it would appear that such notice has been served on the A.N.A. from statements made in the daily press. Had the Balmain Dispensary committee been courteous enough to reply to the communication of the honorary secretary of the B.M.A. and inform him of the steps that were being taken, probably no further action would have been necessary. But in view of the fact that the Balmain Dispensary committee appeared to treat the B.M.A. with contempt, and that the local medical men in Balmain made complaints to the Council of the B.M.A. relative to the treatment of the medical officers and their rates of remuneration, the whole question of the Balmain Dispensary came under the review of the Council. It was only after prolonged discussion and most careful consideration that the Council decided to declare the Balmain Dispensary an association inimical to the interests of the medical profession in terms of Article 36, Articles of Association. Every effort was made to induce the committee of the Dispensary to consider the requests of the B.M.A., and no hasty or harsh action was decided upon. The medical officers were given ample time to fully discuss their position, and no pressure was brought to bear upon them until the Council, having fully considered the matter, decided to notify the medical officers that they could no longer remain members of the N.S.W. Branch of the B.M.A. and hold positions as medical officers to the Balmain Dispensary. In accordance with this, some of the medical officers have given a month's notice of the termination of their contract with the Balmain Dispensary. In view of this action the Balmain Dispensary committee, thinking that they would still further "economise," and still further trample the profession under foot, decided to appoint three medical officers only, who were to devote their whole time and attention to the dispensary practice, and be rewarded at a fixed salary—one at £600 and two at £500 per annum! The Dispensary committee, however, appear to have modified this scheme, and now propose to pay their medical officers £450 per annum and allow them to engage in private practice as well. The latter proposal is scarcely an improvement upon the first, and we believe that the Council of the B.M.A. are opposed to any payment by salary, and consider that the medical officers should receive either the same rate of remuneration as the medical officers of other lodges receive, viz., 16s per member per annum, or that they should be paid a fixed fee per visit or per consultation.

We object strongly to the combination of lodges in the form of medical institutes and dispensaries for the purpose of reducing expenses by cutting down the doctors' fees and paying them a fixed salary. We hope that medical men will take note of the present position at Balmain, and refrain from accepting any office under the committee of the Balmain Dispensary under the terms at present offered. We would again point to the success of the struggle at Inverell, and what has been secured there can be secured elsewhere by firmness and co-operation.

The A.N.A. in Victoria.

The patriotic and magnanimous Australian Natives' Association, when it finds a difficulty in securing satisfactory medical officers, poses as being most generous in its payments to these gentlemen, and endeavours to emtrap medical men by promises of high remuneration. But in Victoria, where this association boasts of being the largest and most influential friendly society in that State, the rate of payment of its medical officers is not very high—in fact, is lower in many places than the minimum recognised in New South Wales. But this does not satisfy them apparently, and so some further sweating is suggested, and it is reported that the Elsternwick branch of the A.N.A. has decided to submit the following recommendation to the annual conference of the association :—" That the incoming board of directors be requested to consider (1) the advisability of adopting a scheme whereby all branches of the association will be placed on the same footing with regard to the payment for medical attendance and medicine; (2) that the board of directors should call for tenders for medical attendance and medicine for the association as a whole, and to report at the next conference." It is high time that the "calling for tenders" for medical attendance on benefit societies was abolished, and we hope that the profession in Victoria will take a decided stand on this occasion, and themselves determine a minimum rate for lodge patients of 16s per member per annum, and the recognition of the principle of a wage limit. There should be no parleying with a society which has done so much to ruin the general practitioner in Victoria.

The Bendigo United Friendly Societies.

The following circular has been issued by the Medical Defence Association of Victoria (Limited):—

"Australian Buildings,
"49 Elizabeth Street, Melbourne.

"Dear Sir,—The post of surgeon to the Bendigo United Friendly Societies will shortly be advertised, and the Council of the above Association wish to bring under your notice the undesirability of any application being sent in from reputable medical men.

"This society is a combination of lodges which has reduced the remuneration of lodge surgeons to what is practically 'sweating,' *being 6s per family per annum.*

"'The number of prescriptions during the year was 37,033, a DAILY average of 101½ (an average of 12½ per member). This will give a fair idea of the labours of your dispensing staff.'—Annual report for 1903.

"Taking the salaries of the medical men, and presuming that each prescription means a visit or consultation, IT AVERAGES 6D PER VISIT or consultation. The above figures do not include a yearly average of 4000 surgical cases which the surgeon has to attend. This would bring the average rate of pay down still further.

"Besides the actual numbers to be seen daily, the distances to be covered are considerable, seeing that the surgeons must attend within *a five-mile radius;* and one of the rules states that they must keep a record of all diseases or accidents treated by them. Emergency cases must be attended *within two hours*, and, according to clause 22, the medical officer or officers shall treat every person entitled to the benefits of the institution who may apply for advice with civility, and not detain them any unnecessary time.

"The mileage rate is interesting, the rates of remuneration being—*Eight miles, 4s 6d;* 15 miles, £1 1s.

"*Chloroform must be administered free. Consultations with outside men are free.*

"In addition to the above stipulations which are imposed on the medical officers is one that he *must operate in all cases without any fee.*

"This note is sent out to all medical men in Victoria for the purpose of disseminating information on this subject, and in the hope that REPUTABLE men will be deterred from applying for such a position.

"An appointment hedged round with such conditions, and remunerated at such a low rate for unusually hard work, cannot be said to be conducive to the best interests of the profession or of the medical officers appointed. Such an enormous amount of work has to be done that *very little of it, if any, can be done well enough* to improve the practitioner from a professional standpoint.

"The medical men of Bendigo and district have held a meeting, and passed the following resolutions :—

"1. That we agree not to meet in consultation with the medical officers of the Bendigo Medical Institute so long as the rule bearing on the salaries of their officers (as per No. 7 in the series of resolutions passed by the Medical Defence Association) is not complied with.

"Resolution—'That it is contrary to the interests of the medical profession that medical men should in the future accept office in friendly societies' institutes where the aggregate salary averages per member less than the rate paid in the district.'

"2. That any member not present who refuses to sign the agreement of the Bendigo Branch of the Defence Association be placed in the same class and position of those accepting appointment to the institute.

"Yours faithfully,
"J. E. BARLOW,
"On behalf of the Council."

A Warning from New Zealand.

From a paragraph in the *Hot Lakes Chronicle* we learn that at the fortnightly meeting of the Loyal Rotorua Lodge, M.U.I.O.O.F., held on January 18th, a discussion took place regarding the appointment of a medical officer for the lodge. During the discussion it transpired that there was every prospect of a hundred members being enrolled, and it was considered by those present that a medical man could be procured by guaranteeing this number and the right of private practice. It is anticipated that in a month's time matters will have sufficiently advanced to warrant advertising in the New Zealand and Australian papers for a medical officer for the lodge. Rotorua is a very small town, with a population of about 1500, including the surrounding district. Drs. McLoughlin and Fieldstad, the two medical practitioners in the town, have declined the position of medical officer on the ground that the entire population would become members and the "private practice" allowed to the lodge doctor would be nil. We hope all practitioners in Australia or New Zealand will take warning and not be deluded into accepting any appointment as medical officer to this lodge.

The Grooms and Coachmen's Union.

PROTEST OF THE MEDICAL PROFESSION IN SYDNEY.

A GENERAL meeting of the medical profession was held at the British Medical Association Rooms on Friday, January 29th, 1904. Dr. Brady was elected chairman.

Dr. Abbott read the circular convening the meeting, and explained that it was convened for the purpose of getting an expression of opinion with reference to the Grooms and Coachmen's Union. He said that the rate of wages now proposed was much higher than at present in existence, besides which there were many other restrictions which would be keenly felt by the general practitioner in the suburbs and country. The hours were limited, and specified times were set apart for meal hours. It was well known that very often a groom was simply waiting about for hours doing nothing, and then an urgent call came which necessitated him being employed after the specified hour of leaving off, and then he would have to be paid overtime. Then, again, an overtime book would have to be kept, which would be open to scrutiny of the Union officers at any time. The present proposals might be the maximum ones, but they should be modified as regards the medical man, and could only be so modified by combined action. He would, therefore, move—"That this meeting of the medical profession requests the Council of the British Medical Association to take whatever steps are necessary to safeguard the interests of the profession in the matter of the Grooms and Coachmen's Union."

Dr. Chas. MacLaurin seconded the resolution, and said it was necessary to combine to deal with this question, and he thought the British Medical Council should be asked to keep an eye upon this matter.

Dr. J. Morton said he thought it would be necessary for the Council to call another meeting of the profession before taking final action, as if it were only the question of increased wages he, for one, would not object, whereas the restriction as to hours was quite another matter.

Dr. Clarence Read said the wages now were about 20s. per week with board and lodging. Some who were paid this were well worth it, while others were not. If the proposals as set forth by the Union were approved, then the majority of suburban practitioners would be compelled to pay about 50s per week. This was a very urgent matter, and should not be lost sight of.

Dr. Terrey asked if the hours could be divided to suit employers; or were they to be fixed, and all hours worked afterwards to be paid for as overtime?

Dr. Furnival said the matter appeared to him as most serious. With regard to the proposed wages he thought they were extortionate, but of course they might be tolerated; but the other restrictions were altogether another matter. Many of the men employed were not grooms, but simply handy men, and were not worth more than they were now receiving. He thought the restrictions as proposed by the Union were intolerable.

Dr. E. C. Hall and Dr. Ludlow also made some remarks approving generally of the resolution.

Dr. Crago supported the resolution, and said it might be as well to get a legal opinion as to the effect of the mere registration of this Union in the Arbitration Court. He thought the Council of the British Medical Association might be trusted to look after their interests in the matter for the present, but later on it might be necessary for them to join some employers' union, in which case he was sure the Council would not be sorry to be relieved of the responsibility.

Dr. Shand said that he approved of Dr. Abbott's resolution, and thought it was the proper way of dealing with the matter. He thought that everyone appreciated a good man when you could get one, but his experience was that a groom has always a hankering after some other occupation, such as tramguards, etc. It might be possible to grade the men and pay accordingly, not put them all down at a fixed rate.

Dr. Terrey said if these proposals were made a common rule great difficulties would arise with the country practitioners. City and suburban men could do without grooms, but country men could not. A country practitioner was compelled to keep more horses than a city man, and under the Union's proposals the expense would be very great.

Dr. Harold Browne said he would like to know if a coachman and a groom were to be employed. What was meant by the term in the Union's proposal?

Dr. Binney said he thought it would be necessary to get a legal opinion as to what a groom was and what a coachman was. Boys might be employed and not called a groom. Another point was as to whether a groom was a domestic servant or not.

The Chairman then put the resolution to the meeting, and it was carried unanimously.

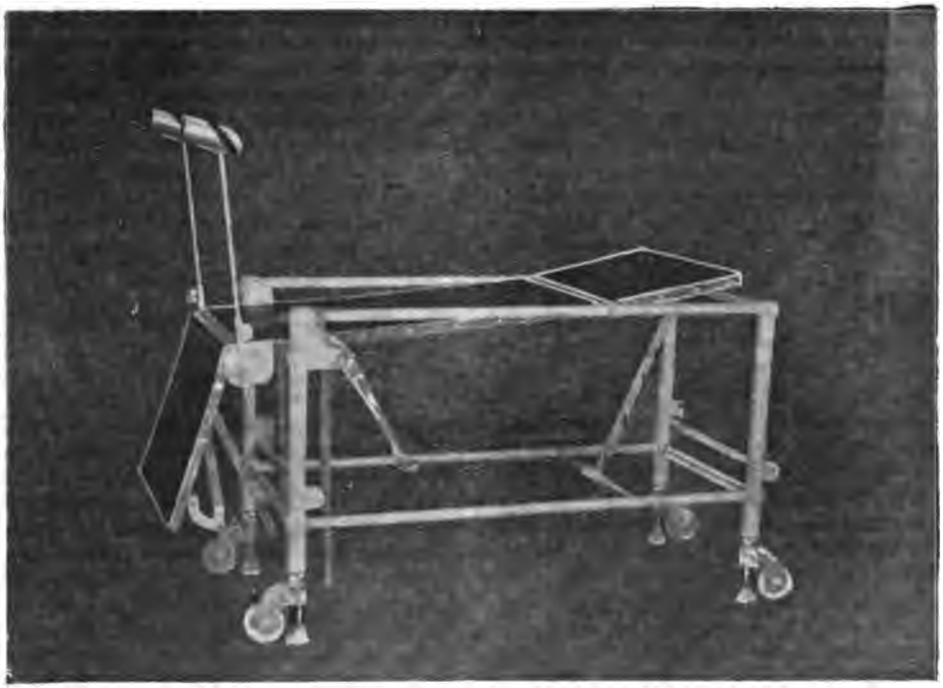
UNIVERSITY INTELLIGENCE.

Sydney.—At a meeting of the Senate, held this month, the following degrees were granted in *absentia*:—Bachelor of Medicine, Richard S. Godsall. The following degrees were conferred: Bachelor of Medicine, C. S. Browne, W. Mawson, G. G. Sharp, M. M. Vernon; Master of Surgery, A. J. Corfe. The Chancellor reported that he had conferred the degree of Bachelor of Medicine upon the following persons, who had complied with all the necessary conditions:—On January 7th, F. C. Adams, V. Benjafield, L. W. Bond, C. A. Buchanan, T. P. Connolly, Constance E. D'Arcy, H. O. Lethbridge; and on January 18th, H. C. R. Bell. Leave of absence was granted for the academic year to Dr. R. Scot Skirving, Lecturer in Clinical Medicine; and Drs. Cecil Purser and A. E. Mills were appointed to deliver the lectures in that subject. The Chancellor reported that he had presided at a conference between representatives of the University and representatives of the Dental Hospital of Sydney in reference to the proposed amalgamation of the two existing dental hospitals. He submitted for the approval of the Senate the amended proposals for amalgamation which had been adopted at that conference. It was resolved that the amended proposals be adopted.

The immediate need for another consumptive sanatorium in Victoria was emphasised at a recent meeting of the Austin Hospital committee. The secretary reported that 22 bad cases were awaiting admission to the male phthisical ward, but that no room was available.

NEW INVENTION.

Hannam's Improved Operating Table.



The operating table as figured above is the outcome of many years study by Mr. Hannam in consultation with some of our leading surgeons. It is said to be capable of forming more *positions* than any other table on the market, and is very easy to manipulate. It can be easily raised or lowered in height so as to suit different operators, and is very strong and steady. A special feature in this table is the *low pelvic position*, which facilitates the flushing out of the pelvic cavity, and prevents the contamination of the general peritoneal cavity in pelvic suppuration cases. It can be had with or without warming plates.

OBITUARY.

James Grafton Carstairs, L.R.C.S., M.D., 1850, Geelong, Victoria.

Dr. James G. Carstairs expired at his residence, Retreat-road, Newtown, on the 13th January, after a prolonged illness. The deceased, who was 74 years old, was a son of Surgeon Carstairs, of the Honourable East India Company's service, and was born at Poonah, India. When three years old he was taken to Scotland and brought up in Cupar, the county town of Fife. He began his education at Madras College and University, St. Andrew's, East Fife, and thence he proceeded to Edinburgh University. He entered the immigration service, and brought out the ship "Isle of Skye," 330 tons, which arrived at Point Henry, Geelong, in February, 1852. He commenced the practice of his profession in Moorabool-street in 1854. He had been health officer of the shire of Bellarine since 1870, of the borough of Newtown and Chilwell since 1884, and of the town of Geelong since 1889. The deceased married, in 1859, a daughter of Mr. W. P. Weston, then Premier of Tasmania. She died in 1860, and he then married a daughter of Mr. John Smith, of the Geelong Post Office, who survives him. There are two sons. One is engaged in pastoral pursuits in New South Wales, and the other is Captain Harold Carstairs, who is now in South Africa.

Dr. J. Harris Browne, who recently died in England, was one of South Australia's pioneer pastoralists. He gained distinction nearly 60 years ago as one of the intrepid explorers who accompanied the late Capt. Sturt on his memorable journey to the centre of the continent. He was the sole survivor of that gallant band. The late Dr. Browne was born at Westwood, Wiltshire, England, on April 17th, 1817. He studied medicine in Paris, and came to South Australia when quite a young man. For several years he was in partnership with his brother, Dr. William J. Browne, and with him became largely interested in pastoral estates throughout the colony. After several visits to the old country, Dr. Browne eventually made his home there. His wife died many years ago, but he has left a family of four children. His only son, Mr. T. L. Browne, resides on Moorak station, in the south-east, near Mount Gambier.

PUBLIC HEALTH.

New South Wales.

Health of the Metropolis.—Dr. Armstrong reports as follows:—During the month of January 513 deaths of residents of the metropolis were registered. This figure corresponds to an annual death-rate of 12·13 per 1000 of the estimated mean population, and is less than the number of deaths recorded in December (536), and slightly above the average number for January during the previous five years. Diarrhœal diseases (diarrhœa, enteritis, dysentery, etc.) caused 120 deaths, or 19 less than in December, and 13 less than in January, 1903, but 19 more than the average number of deaths under the same headings during the corresponding month of the five preceding years. Eighty-three of the deaths from diarrhœal disorders were those of infants under one year of age. Infantile deaths under all headings show a gratifying decrease. They numbered 168, as against 192 in December. Deaths from all zymotic diseases (excluding diarrhœa) numbered 26, of which three were due to measles, one to scarlet fever, two to influenza, eight to whooping cough, one to diphtheria, nine to typhoid fever, and two to epidemic cerebro-spinal meningitis. The mortality under all these headings is below that of the quinquennial average for January. The death lists from phthisis (36), cancer (35), and respiratory diseases (39) show no notable departures from the average of previous experience. Attacks of notifiable infectious diseases notified during the month were—Scarlet fever 78, diphtheria 36, and typhoid fever 83. Diphtheria was slightly above the average number of cases for January (32). Both scarlet fever and typhoid fever are well below their previous averages. The number of cases of typhoid fever is lower than the number notified during any previous January since notification became established by law. The epidemic prevalence of scarlet fever which has continued for the past 18 months appears to have passed away. The number notified this month is less than that of any previous month since May, 1902.

Vital Statistics.—The Government Statistician has issued a tabulated statement with reference to the number of deaths that occurred in the metropolis during 1903. Specific febrile or zymotic diseases caused 568 deaths, the average per year for the previous five years being 682. Following the same comparison throughout, parasitic diseases accounted for 11 deaths, as against 21; dietetic diseases 52, as against 55·2; constitutional diseases, 119 deaths, as compared with 109·14; developmental diseases, 475 deaths, as against 437; nervous system, 492 deaths, as against 586; and diseases of respiratory system, 696, as against 714·2. The total number of deaths was 5913, as against a yearly average of 5902 during the previous five years.

Infectious Diseases.—The record of infectious diseases throughout the State is remarkably small up to the present. When the summer is an average one, infectious diseases, especially typhoid, are most prevalent during December. In addition to the low temperature experienced this summer, good rainfalls have greatly purified the sources of water supply in country districts. Dr. Ashburton Thompson, President of the Board of Health, states that the only outbreak of typhoid fever brought under the notice of the Board this summer has taken place at Wellington, where 16 cases from that town and surrounding districts are under observation. A report made by a Government medical officer ascribes the outbreak to the usual defective sanitary arrangements. The local authorities have been urged to adopt efficient by-laws to meet the difficulty. During December last there were 75 cases of typhoid in the metropolitan district, or 25 per cent. less than for December of 1902.

Queensland.

Prevention of Cousumption.—During his recent visit to Victoria and New Zealand, Dr. Hirschfield, secretary for the Queensland Society for the Prevention of Consumption, gave some attention to the measures taken in those States for dealing with consumption, and collected all the information he could bearing upon its many phases. He states that in Queensland we have to recognise, first, that what is good for the consumptive is good for the general community. With reasonable care no consumptive is a danger to the community. Compulsory notification would be premature, but it is imperative that increased accommodation should be found for consumptives. We have at the present time only the sanatorium at Dalby, which is for early cases, and the Hospital for Chronic Diseases at Diamintina, which, besides other cases, takes a limited number of consumptives. On the other hand, the general hospitals refuse to take consumptives, so that the provision for consumptives is more inadequate here than it is in any other of the States. The Society for the Prevention of Consumption here is now entering into communication with several hospitals, and having a small banking balance at its disposal, is offering the assistance of £20 to each hospital that will undertake to provide some separate shelter for consumptives. These hospitals have been selected in different parts of the country, the preference being given to those which have a large amount of ground at their disposal. A great deal could be done by the Government bringing some pressure to bear upon some of the country hospitals, which have a large number of beds at their disposal, and only a small proportion of them occupied. Some of these hospitals could certainly be made use of for housing consumptives, many of whom die before they can get admission to any institution.

Infected Houses.—A point to which sufficient importance is not attached in either New Zealand or Victoria is the notification of houses that consumptives have lived in. In the Queensland Health Act, which dates from September, 1902, there is an Order-in-Council requiring the notification of all houses in which infectious diseases have occurred, and fixing a penalty of £20 for the letting of such houses until they have been properly disinfected. That, so far as consumption is concerned, is practically a dead letter; and it is one of the most important points for the prevention of consumption. The neglect of it leaves open one of the most serious channels of infection. A similar provision exists in Victoria, but it is certainly not in active operation. There is no doubt many people get first infected from living and sleeping in houses previously occupied by consumptives. The public should refuse to take a house until a certificate has been obtained from the Health Department that they have been previously disinfected.

Bubonic Plague.—Two cases of plague have been discovered in Brisbane. Strenuous efforts are being made to destroy rats. In consequence of the plague in Brisbane the importation of forage and grain from Queensland has been prohibited by the authorities in New South Wales.

Victoria.

Increase of Typhoid.—A recent report of the medical superintendent of the Melbourne Hospital to the committee disclosed a serious increase in the number of typhoid fever cases. Out of a total of 293 patients in the institution 48 were suffering from typhoid fever, being exactly double the number in the hospital at the same time last year. Several of the members expressed surprise at the increase, as the summer so far had been cool.

New Zealand.

Smallpox.—Five cases of smallpox were reported from Christchurch on 15th January, and the next day two more were notified. The patients and contacts were located at Bottle Lake Hospital, seven miles from Christchurch and fourteen from Lyttelton. On the 20th, eleven patients and two suspects and 25 contacts were in the hospital. At Sydney, Melbourne, and Hobart precautions were taken to prevent the importation of the disease; no passengers from New Zealand being allowed to land unless able to give conclusive evidence as to the locality from which they travelled, also of successful vaccination within six months before arrival, also re-vaccination on landing. The *Otago Daily Times*, N.Z., of 19th January, stated that the Health Department had followed the trail of the smallpox outbreak and had traced it back to 3rd November, but it seems that this date cannot be absolutely relied upon as being correct, and this uncertainty caused uneasiness in the public mind as to the alertness either of the medical profession in diagnosing the disease or negligence of the patient in reporting himself. The outbreak happily has been effectively dealt with, preventing its assuming as grave a proportion as that which recently occurred at Launceston, Tasmania.

HOSPITAL INTELLIGENCE.

Sydney Hospital.—The annual report states that the board was glad to be able to show an increase of £55 in the regular subscriptions over the amount received for 1902. While gratefully acknowledging the support received the board wished to point out that for an institution which, in one year, admitted to its wards 4057 in-patients, treated 16,877 out-patients, and 7985 casualty cases, and whose hon. medical staff performed 2627 serious operations, the financial assistance rendered by the public was wholly inadequate. The directors had hoped to have carried out further improvements during the year, notably in connection with the supply of hot and cold water to the centre of each ward, and the remodelling of the children's wards, but these works had of necessity been postponed until the financial outlook became more assured. It was reasonably certain that the desired improvements would be effected this year, as consequent upon the acceptance of more favourable contracts for the principal supplies, the cost of working the hospital would be less, and there should be money available for carrying out permanent improvements. The enlarged Nightingale wing had done much towards adding to the comfort of the nursing staff whilst on duty. During the year the skiagraphic department had been practically reconstructed under the supervision of Dr. Herschel Harris. Gas has been entirely dispensed with, and an electric installation has taken its place. A second complete X-ray outfit, specially selected and designed by Dr. F. H. Low, secretary to the Röntgen Society of London, had been added, and the directors felt deeply indebted to Dr. Low for his invaluable services in this matter. An important addition had been a Miller ultra-violet lamp for the cure of lupus, similar to one used at St. Bartholomew's Hospital, London, and, to be quite up to date, a radium button was being imported for therapeutic purposes. The Moorcliff branch of the hospital at Miller's Point had been further improved, and 667 patients were admitted for treatment during the year. The Regent-street and Paddington branches had proved of great benefit to the suffering poor of the districts. At the examinations held at the end of the year in connection with the Training School for Nurses, there were 53 candidates—29 in the first year, 6 of whom partially failed; 12 in the second and third years respectively, all of whom passed.

Balmain Hospital.—The annual meeting of the subscribers of the Balmain Hospital was held last month. The committee's annual report, which was adopted, showed that the number of cases treated was as follows:—Indoor department—Remaining from 1902, 16; admitted during 1903, 323 (males 207, females 132), making a total of 339 as compared with 341 for the previous year. In the outdoor department 2395 cases were treated, necessitating 10,993 attendances, against 2193 cases, necessitating 8672 attendances in 1902. The average daily number in the hospital was 16. The average residence of discharged persons in days was 17. The mortality on the year's cases was 5·8 per cent., and of the 20 deaths that occurred, a large percentage was in a hopeless condition when admitted. Of the remainder 287 were discharged cured, 12 were discharged relieved, and two unrelieved, leaving 18 remaining for further treatment. The hon. treasurer's financial statement showed that the total receipts for the year were £1373 5s, and the expenditure £1444 6s 1d.

Royal North Shore Hospital.—The sixteenth annual meeting of the above institution was held last month at the North Sydney Town Hall. The annual report showed that the year had been an eventful one in the annals of hospital work on the north side of the harbour, marked as it had been by the opening of the first portion of the new hospital. This work had been completed none too soon, seeing that within a few weeks after the opening the accommodation available was taxed to its utmost, and the institution had remained practically full ever since. In the old hospital there were 153 patients treated, of whom 120 were discharged cured, 14 relieved, 1 unrelieved, and 9 died, while were removed to the new buildings. In the new hospital, 340 patients had been treated, of whom 239 were discharged cured, 19 relieved, 10 unrelieved, and 30 died, leaving 42 under treatment at the end of the year. The total number of patients treated was, therefore, 484. The average daily number resident in the old hospital was 21·65, and in the new 39. The total number of deaths (of which eight occurred within 24 hours of admission) was 39, being 8·05 per cent. The treasurer's statement showed that the income, exclusive of interest accrued on investments, had been almost equal to the expenditure, and that the subscriptions had totalled £236 9s, an increase of £95 on the previous year, while the donations were £510 4s 1d, as against £490 4s 5d, in addition to which £97 1s 2d was donated towards the new building fund. The average cost per bed had been £52 13s 4d this year, as against £53 11s 4d for the previous year. One hundred and sixty-three patients contributed towards their maintenance the sum of £243 9s 5d. The list of subscribers showed an increase over the previous two or three years. It was estimated that at least £2400 per annum would be required to successfully carry on the work under present conditions, or in round numbers, £1200 more than it cost to maintain the old hospital.

Queen Victoria Homes for Consumptives, N.S.W.—At the last monthly meeting of the house committee of the Queen Victoria Sanatorium, Wentworth Falls, and the Home for Consumptives at Thirlmere, the medical superintendent's report (sanatorium) showed that during the past month six patients had been admitted and five had been discharged. Of those discharged two were improved, two had the disease completely arrested, and one died. The matron's report (Thirlmere) showed that there were 41 patients in the home. During the month 10 had been admitted; six had been discharged. The majority of the patients were progressing favourably. At a meeting of the executive committee last month the hon. secretary reported that Mr. Pridham, engineer to the Water and Sewerage Board, had visited the sanatorium at Wentworth Falls to report on the water supply, and he recommended that a storage reservoir be built at the head of a marshy gully, some 800 yards from the Home, whence the supply would be by gravitation. The land recommended belonged to Mr. Walter Hall, and he had kindly donated the area required, comprising some 21 acres. It was decided that tenders be called for the building of a concrete storage reservoir to contain 100,000 gallons of water. The architects submitted rough plans for extension of the present buildings, and it was decided that plans and specifications be prepared and tenders called for the building of two wards to contain six beds each, and two other wards to contain two beds each. The new extensions, together with the shelters, will bring the bed accommodation up to 40, but much more accommodation is still urgently needed for the class of patients treated at Thirlmere, since the majority of those applying are afflicted in the middle or later stages.

West Maitland Hospital.—The annual meeting of subscribers to the Maitland Hospital was held last month, Mr. Neville D. Cohen, president, in the chair. The report showed that a new hospital was in course of erection at a cost of £8000, of which £4000 was a special grant from the Government, and the balance from the trust funds of the Maitland hospital. During the year 412 cases had been treated; 289 were cured, 38 relieved, 8 unrelieved, and there had been 44 deaths, 33 remaining in the wards. The balance-sheet showed an income of £2273 8s 6d, and the expenditure totalled £2275 15s 9d.

Newcastle Hospital.—The annual report of this institution states that during the year 1024 indoor patients had been treated, and 1302 outdoor patients: while 348 surgical operations had been performed, as compared with 318 in the previous year. The bed accommodation had been sufficient to meet the demands. The income for the year amounted to £5070, and the expenditure totalled £4243. A special grant had been received during the year from the Government of £1000 to recoup past expenditure on equipment and furnishing an operating block and nurses' home.

Parramatta District Hospital.—At the annual meeting of the subscribers to the Parramatta District Hospital the report presented was of a very satisfactory character, and the balance-sheet showed that the hospital finances were in a much better condition than at the outset of the year. This was in a measure due to the fact that the various outlying districts had taken a more lively interest in the welfare of the institution, and had organised hospital aid societies. The number of patients treated during the year was 303. Of this number 200 had been discharged cured, 32 relieved, five unrelieved, while 40 died, and 26 were remaining in. In addition to this 812 out-patients had received medicines, and 398 casualties had been treated.

Melbourne Hospital.—The financial statement of the Melbourne Hospital for the quarter ended with the past year shows a much improved position. At the end of the third quarter of 1903 the hospital debit balance was £5368 10s 6d. This was reduced during the succeeding quarter by £2858 9s 11d. The past year, therefore, closed with a debt of only £2510 0s 7d, a state of affairs which is regarded by the committee with considerable satisfaction. The improvement is mainly due to collections and contributions, though economies also assist largely.

Hobart Hospital.—At the monthly meeting of the Hobart Hospital Board on January 8th, it was reported that the fees collected during the year amount to £1210 6s 4d, as compared with £1272 11s 2d recovered during 1902, being a deficiency of £62 4s 10d. The total expenditure to date amounts to £7473 0s 2d, as against £7648 3s 7d in the preceding year. In 1902 the grant-in-aid was £6360, for the year just ended £4500 plus £1223 4s 7d. Government subscription on the £1 for £1 principle, or £636 15s 5d less than the amount voted for the up-keep of the hospital in 1902, and this £636 is practically what the debit balance amounts to at the close of the year's proceedings. During the year 1416 cases have been treated in the hospital, as compared with 1587 in 1902, the daily average number of occupied beds was 86 as compared with 89 last year, and the average stay in hospital per patient 22 1⅓ days, as compared with 20⅔ days. Of the 1416 cases treated 597 were non-resident of Hobart. In the out-patients' department 1728 new cases were treated during the year, casualties 355. Total attendances, 6122.

Medico-Ethical and Medico-Legal.

Boric Acid in Milk.—Last month Mr. C. M. Payten, S.M., at the Central Police Court, Sydney, delivered his ruling in the case in which Inspector Duncan, of the City Council, proceeded against Reginald Purbrick for having, on July 20th, 1903, sold to Edward Gundry some concentrated milk, alleged to be unfit for human consumption on account of the antiseptic boric acid being mixed with it in a proportion exceeding the one-thousandth part of a grain per pint of the milk. Mr. Payten said that the information purported to be laid under the 78th section of the Public Health Act, which was read with the 86th section, which prescribed the conditions under which antiseptics might be mixed with food. The defendant was the manager of the Bacchus Marsh Concentrated Milk Company, Limited, which manufactured concentrated milk, and in Sydney disposed of it principally to the shipping trade. For the purpose of keeping the milk (generally about seven days) an antiseptic or preservative was used. In the article sold to the inspector there was boric acid to the extent of 14 grains per pint, or 10·15 grains per lb The defendant deposed that the company used about 30 grains of boric acid to the lb. of milk in summer. In the winter 20 grains or less were used. For the defendant it was contended that he should dismiss the information on the grounds that the regulation was invalid, because it was unreasonable, and that the provision made did not regulate as required by the 86th section, but for practical purposes prohibited the use of boric acid as a preservative or antiseptic in milk. Mr. C. W. Finch, an analytical chemist, gave evidence to the effect that the smallest quantity of which he could make a quantitative analysis of boric acid to a pint of concentrated milk would be about an-eighth of a grain, or one part of boric acid to 76,800 parts of milk. One-thousandth part of a grain of boric acid to a pint of the milk was equivalent to one part of acid to 10,000,060 parts of milk. The quantity prescribed by the Board of Health was 135 times less than could be quantitatively determined. He (the witness) could not determine quantitatively one-tenth of a grain to a pint of milk. Over 100 times as much as the Board allowed would have to be used before the Board would be able to determine it. One-thousandth part of a grain of the acid was of no use as an antiseptic. The smallest quantity necessary to act as an antiseptic to a pint of concentrated milk was at least 15 to 30 grains, according to that witness. For these reasons he was asked to say that the regulation regarding the quantity of antiseptics usable in milk was bad on account of its unreasonableness. The leading case on the subject was decided by a specially constituted Court called by the late Chief Justice of England, Lord Russell, of Killowen, in which the question of reasonableness was fully dealt with in May, 1898. Lord Russell, in the course of his judgment, had said that Courts should be slow to condemn as invalid any by-law on the ground of unreasonableness. The Chief Justice held the by-law to be valid, five members of the Court agreeing with him, while one disagreed. That case, so far as regarded checks and safeguards, was much the same as that under notice. The Board of Health was a representative body, consisting of not less than seven nor more than ten members, four of whom at least had to be legally qualified medical practitioners. They were appointed by the Governor, and were a body corporate. The regulations were published in the "Government Gazette," and did not have force until 90 days after publication. The regulations were not unchangeable, as they might be altered or varied. The words of the judgment he (Mr. Payten) had quoted could not have been used in much stronger terms in enjoining judges and magistrates to support as far as possible by-laws issued by local authorities unless it could be shown that the by-laws were made without jurisdiction or were obviously unreasonable. Especially was this rule to be observed in cases where the by-law was made by a representative authority, such as a municipal council, or, as in this case, a board of health. The Court should not be disposed to pick holes in rules that dealt with local matters and local requirements, where the local authorities were often better able to judge of them than the Courts. He was not prepared to hold the by-law unreasonable, and he would therefore convict the defendant of the offence charged against him, and fine him the sum of £2, in default seven days' imprisonment with hard labour.

Breach of the Medical Practitioners Act.—According to a report in the *Sydney Morning Herald* last month, at the Glebe Police Court, Joseph P. Flood, aged 43, was charged with having, at the Glebe, on January 10th, practised as a legally qualified medical practitioner at a time when he was not registered or entitled to be registered as such under the Medical Practitioners Act and Amending Act. Evidence was given that the accused used the title of doctor, and professionally attended a woman who was lying ill at the Glebe. He said he was sent by another person who had been professionally attending the patient. The accused, after examining the woman, prescribed for her, and then asked for his fee. He was given a sovereign, and then left the house, but did not return. His defence was that he represented himself, not as a doctor, but as medical attendant only, and that he came to assist the person who had been attending the patient. Before leaving he asked for a few shillings, not as a fee, and received a sovereign on the understanding that he would return the change. The accused was fined £5, in default imprisonment for one month.

MEDICAL NOTES.

Charitable Donations and Bequests.—Lord Tennyson has made a donation of £100 to the capital fund of the Queen's Maternity Home for Married Women, at Rose Park, Adelaide. At the last meeting of the committee of the Queen Victoria Home for Consumptives, New South Wales, a cheque was received from Lady See for £35 for the further erection of shelters in the grounds. Mr. Frank Grimley also sent a cheque for £50 for the same object. The hon. treasurer reported having received a cheque from Miss Eadith Walker for £25; from Mrs. J. L. Brown, Bowenfels, cheque for £12; and a cheque for £21 15s 9d from Mrs. Austin, the proceeds of a drawing-room fête held by her. The late Mr. Frederick Robert White, of Booloominbah, near Armidale, N.S.W., has made the following bequests:—Armidale Hospital, £500; Murrurundi Hospital, £500; Muswellbrook Hospital, £500; Sydney Hospital, £1000; Prince Alfred Hospital, £1000.

The Army Medical Corps of Victoria.—The Army Medical Corps of Victoria recently had three days' training in camp in the neighbourhood of Heidelberg. Out of a total establishment of 50 officers and men 46 were all to attend. The corps was in command of Major Horne and Captain Sutherland, and turned out for the first time with its four new ambulance waggons well horsed. Officers and men showed the greatest interest in the work carried out at the camp, the training from every point of view being a distinct success.

Inspector-General of Lunatic Asylums, Victoria.—We understand that no applications have so far been received from medical men in England for the position of Inspector-General of Victorian Lunatic Asylums. One officer of the Lunacy Department of Victoria and one officer connected with the New South Wales service are reported to be applicants for the vacant post, but no appointment will probably be made for some weeks.

Adulteration of Food.—According to a cablegram in the *Sydney Morning Herald*, Mr. W. P. Hepburn, chairman of the Interstate and Foreign Commerce Committee of the House of Representatives of the United States, introduced into that House a bill prohibiting interstate trading in adulterated or wrongly branded food or drugs, including foreign foods or drugs. The bill has been adopted by 200 votes to 168.

Dental Hospital of Sydney.—At the third annual general meeting of the Dental Hospital of Sydney, the president, Dr. E. Randolph Magnus, said that during last year 8335 cases were treated, involving 9472 extractions besides other dental operations. The total attendances were 9337. The Dental Hospital has been proclaimed a public hospital under the Public Hospitals Act of 1898, and a special grant of £100 had been voted by Parliament in aid of the funds of the institution. Some particulars were also given concerning a proposed amalgamation with the University Dental Hospital.

Bubonic Plague in Western Australia.—Dr. Anderson, who was deputed by the Government to carry out a series of inquiries in India into the occurrence and treatment of bubonic plague, has completed his report to the Colonial Secretary. His experience in India confirmed him in the belief that plague in the great majority of cases was not a contagious disease, as ordinarily understood. The discovery of a case of plague in a general hospital should not necessitate the quarantining of the institution. All that was necessary was the disinfection of the bed and bedding of the patient, and there would be no likelihood of any other cases occurring. The pneumonic form of plague was highly infectious, but differed from the ordinary, or bubonic, form. So far, no cases of primary pneumonic plague had occurred in Western Australia.

Australasian Trained Nurses' Association.—A special meeting of the members of the Australasian Trained Nurses' Association was held on February 4th. The rules were amended to provide that the governing body of the association should be a council, consisting of the president, the vice-president, hon. treasurer, two hon. secretaries, and 20 members, of whom five should be medical practitioners, five matrons and superintendents of nurses, five sisters and nurses, three representatives of the midwifery branch, and two might be hon. members. The midwifery nurses were subsequently introduced to their elected representatives, Drs. Ada Affleck-Hardman, W. H. Crago, and R. Worrall.

The New Dental Board of Adelaide.—The Government has appointed a new Dental Board to administer the Act. It will consist of Arthur Edmund Shepherd, L.R.C.P. and S.; Bronte Smeaton, M.B., Ch.B.; Edward John Counter, D.D.S.; Peter Crank, L P.S. and R.C.S.; John Trotter Hardy and Benjamin Thomson. All of these, with the exception of Dr. Shepherd, were on the old board, and the new member will take the place of Dr. A. E. Wigg.

The Distinguished Service Order. — The Distinguished Service Order, the companionship of which was conferred upon a number of Australians for their services in the South African campaign, is to rank next to the Royal Victorian Order. The Badge consists of a gold cross, enamelled white, having on one side the Imperial crown in gold, upon a red enamelled ground, within a wreath of laurel. On the reverse side is engraved the Royal cypher, E.R. VII. The badge is to be worn on the left breast suspended by a red riband edged with blue of 1 in. in width.

Second-hand Shops and Fodder Stores.—The health committee of the City Council has framed new by-laws, regulating the conditions under which fodder stores and second-hand shops shall be carried on. It is provided that " the occupier of any premises within the city of Sydney which shall be used for the purpose of a marine store or for the sale or storage of any second-hand timber, iron, barrels, empty cases, or other materials or things of a like nature, shall within one month after service upon him of a notice signed by the town clerk of the said city requiring him so to do, cause all such timber, iron, barrels, empty cases, and other materials and things as aforesaid, to be kept on open platforms or trestles to a height of at least 12 in. clear of the ground or floor, and shall keep the ground or floor beneath such platform or trestles clean, and the space between such ground or floor and the said platform or trestles free from obstruction. It is also provided that "the owner of any premises, to be hereafter erected, or other premises certified by the City Health Officer to be in any insanitary condition, upon which is a fodder store used in connection with any stable, cow-yard, or cattle-shed thereon, shall, within one month after service upon him of a notice signed by the town clerk requiring him so to do, cause such fodder store to be floored with concrete or other material not less than 4in. thick, impervouis to rats, and the walls, ceilings, and partitions thereof to be so reconstructed, altered, or repaired as to prevent the harbourage of rats therein or the access of rats thereto."

Sanitary Association of Sydney.—Recently a visit of inspection was paid to the Thomas Walker Hospital, Concord, Parramatta River, by the members of the Sanitary Inspectors' Association of New South Wales, more particularly for the purpose of viewing the septic tank and filter beds installation in operation at the institution. The party were conveyed from Sydney in the steam-launch "Eva," kindly placed at the disposal of the association by the State Government. Reaching the filter-beds, the secretary of the association, Mr. W. E. Gundry, who had charge of the arrangements, read a short paper, outlining the method of construction, and exp'aining in detail the operation of the processes. Afterwards, at the matron's invitation, the party inspected the internal arrangements of the hospital, and were most favourably impressed by the uniform and unvarying excellence of all that they saw—by the spacious wards and dormitories, and the bright, bracing atmosphere of good cheer everywhere pervading. On leaving, Dr. Andrew Ross, M.L.A., thanked the principal nursing staff on behalf of the association for having afforded the members an opportunity of obtaining interesting and valuable instruction, which would greatly increase their efficiency as officers engaged in the public health administration of the State.

PERSONAL ITEMS.

Professor Watson is spending the University vacation in Japan, in the hope that he may see some fighting when war is declared between Russia and Japan.

Dr. Lendon has returned to Adelaide, after spending a most enjoyable holiday in India.

Dr. Alfred Wigg has left Adelaide on a trip to England. He expects to return in nine months.

Dr. Suckling has been appointed Resident Medical Officer to the Adelaide Children's Hospital.

We regret to learn that Dr. Hornabrook, of Adelaide, who went to Wallaroo to attend the fever patients from the ship "Celtic Queen," which recently arrived from Acapulco, in Mexico, was thrown from a motor cycle, and sustained injuries to one of his legs.

At the annual meeting of the Tumut Hospital, Dr. Mason declined to accept a testimonial valued at £50, which had been decided upon at the annual meeting of members as a mark of their appreciation of the honorary services rendered by him during the last 18 months. It was, therefore, resolved to give a written expression of their feeling of thanks.

Dr. E. S. Jackson, of Brisbane, who has been suffering from dengue fever, has gone to Tewantin for a few days.

Dr. T. B. Wilson has left New Zealand for Canowindra, via Woodstock, N.S.W.

PRACTICES FOR SALE.

N.S.W.—Cash take, £1300; appointments, £400. Price, £250.

N.S.W.—Cash take, £500. Price, £50; terms if required. Good district.

N.S.W.—Cash take, £600. Price, £300. Appointments, £200; suit R.C. Good town.

QUEENSLAND.—Cash take, £1000; appointments, £375. Price, £350. Coastal town.

N.Z.—Cash take, £900; appointments, £186. Price, £250. Unopposed. Specially recommended.

N.Z.—Cash last 2 years, £2500 p.a.; established 27 years; average income, £1800. Price, £800; £500 down.

Thirteen other practices are available in N.Z., including one city of Wellington; one is available city of Hobart.

Openings available N.S.W.; guarantees £200 to £300. Incomes about £500.

Mr. F. W. LOXTON,
16 O'Connell-street, Sydney.—[ADVT.]

Dr. T. O. Williams, of Auckland, who has been ill for some weeks past, is now recovering.

Dr. C. E. Marsden, formerly house surgeon of the Melbourne Hospital, and afterwards senior resident surgeon of St. Vincent's Hospital, Sydney, has gone to Wellington, New Zealand.

Dr. R. Gordon Macdonald has been elected as councillor for South Ward, City of Dunedin.

Dr. and Mrs. Young, of Invercargill (N.Z.), has recently returned from a nine months' visit to England.

Dr. Barnett, of Dunedin, has been granted 12 months' leave of absence from his duties as lecturer on systematic and practical surgery at the Otago University. He is leaving in January, and intends making a trip through America, the Continent of Europe, and Great Britain.

Dr. J. H. Little, late of Armidale, N.S.W., has removed to Stanley-street, South Brisbane.

Dr. Collins, senior medical officer to the Hospital Board, and the architect, recently paid a visit to the Wellington and Christchurch Hospitals, to get some suggestions for the new operating theatre for the Auckland institution, calculated to cost about £1700.

Dr. H. J. Brennand has commenced practice at 94 Miller-street, North Sydney.

Dr. T. W. Sinclair has returned to Melbourne after an absence of two years in England. While in London he obtained the diploma of Public Health from the Royal College of Surgeons, London.

Surgeon-General Williams, of the headquarters staff of the Commonwealth, arrived at Adelaide from England by the "Ville de la Ciotat."

Dr. and Mrs. Gamble were entertained by the staff of the Sunbury Asylum, Victoria, and presented with a handsome coffee service and clock prior to their departure for Kew. Dr. Campbell, late of Queensland, succeeds Dr. Gamble as medical officer at Sunbury Asylum.

Mr. Horace Iles Holmes, M.B., B.S., has been appointed resident medical tutor at Queen's College, Melbourne. He took his degrees in 1901, and at the final honor examinations in February, 1902, was placed first in the first class in medicine, with the University scholarship; second in the first class in surgery, and first in the second class in obstetrics. He has since been engaged as resident medical officer in the Melbourne Hospital and the Hospital for Women.

Dr. H. C. Garde was recently presented with an illuminated address by the residents of Maryborough, Queensland, and subsequently entertained at a banquet. Dr. Garde has resumed practice at Brisbane.

A private cablegram received in Adelaide recently from London announces the death of Dr. J. H. Browne, who was the sole survivor of the little band commanded by the late Captain Sturt, the explorer, who in 1828 explored the Macquarie and Murrumbidgee Rivers. Finally he struck the Murray, which he referred to as "the antipodean Nile, the prince of Australian rivers."

Probate of the will of Dr. W. Butler Walsh, late of Kew, who died on November 15th last, is being applied for by the Trustees, Executors, and Agency Co., Ltd. The estate is sworn at the value of £10,987, which, with the exception of a legacy of £100 to his brother Phillip, is bequeathed to his widow and children.

Dr. J. Johnston, of Williamstown, has been elected a member of the Public Board of Health of Victoria for the North Yarra Province. This is the first medical man to be appointed to that Board.

Dr. W. Sproule has left Mittagong, N.S.W., for Kanowna Hospital, West Australia.

Dr. W. Macansh, of Middle Brighton, Melbourne, Victoria, has been appointed to the Commission of the Peace.

Dr. H. W. Mason has been presented with a testimonial, value £50, in appreciation of his services during the past year and a half as hon. medical officer of the Tumut Hospital, N.S.W.

We regret it was notified incorrectly in our last issue that Dr. Thomas Lane had removed from Inverell, N.S.W., to Mosman, Sydney. Dr. Lane is only at Mosman on a holiday.

MEDICAL APPOINTMENTS.

NEW SOUTH WALES.

Cox, Allaster Edward, M.B. (Edin.), J.P., to be an Appointed Member of the Licensing Court for the Licensing District of Forbes.

Florance, Egbert, M.D. (Univ. Penna., U.S.A.), to be Government Medical Officer and Vaccinator at Cootamundra, *vice* Dr. Walter Hull, resigned.

Fullerton, Alexander Young, L.R.C.P. (Lond.), to be the Deputy Licensing Magistrate of the Licensing Court for the Licensing District of Murrurundi.

Linton, Edward, L.R.C.P., L.R.C.S. (Edin.), L.F.P. *et* S. (Glasg.), to be Government Medical Officer and Vaccinator at Wellington, N.S.W., *vice* Dr. C. D. H. Rygate, left the district.

MacLaurin, Charles, M.B., M.S. (Edin.), has been appointed a member of the Police Medical Board, in the room of Sir Norman MacLaurin, M.L.C.

Muscio, Allen, M.B. (Syd.), to be Government Medical Officer and Vaccinator at Emmaville, *vice* Dr. F. C. S. Shaw, resigned.

Reid, C. W., M.B., B. Ch., Senior Medical Officer, Department of Lunacy, at present acting as Port Health Officer, Sydney, and Visiting Medical Officer Shaftesbury Reformatory, to be Port Health Officer, Sydney, in the place of Dr. William Pierce, who has retired.

SOUTH AUSTRALIA.

Loria, Dr. A., to be Health Officer for the district of Mount Crawford.

Medical officers to attend to the destitute poor and aborigines within the undermentioned districts, 1904, viz :—

Magee, C. Crosier, District of Penola.

Shanahan, F. P., township of Hawker and radius of 15 miles (*ex* aboriginies).

TASMANIA.

Hogg, Gustave H., M.D., to be Port Health Officer for Launceston.

Parker, Charles, M.B., C.M., to be Honorary Medical Officer of the General Hospital, Launceston.

Sprott, Gregory, M.D., to be Port Health Officer for Hobart.

WEST AUSTRALIA.

Anderson, T. L., M.B., to be member of the Honorary Medical Staff of the Fremantle Public Hospital.

Astles, Harvey Eustace, M.D., to be President of the Dental Board for a term of three years.

Blackburne, G. H. S., to be Acting President of the Central Board of Health during the absence on leave of E. Black.

Hope, J. W., to be Acting Superintending Medical Officer at the Fremantle Lunatic Asylum, during the absence on leave of S. H. R. Montgomery.

Montgomery, S. H. R., to be Inspector-General under the Lunacy Act, 1903.

McNaughton, John, to be Officer of Health at Peak Hill, *vice* Dr. T. Edwin Ick, resigned.

Randell, A. E., to be Officer of Health at Canning, *vice* Dr. R. P. Brown, resigned.

NEW ZEALAND.

Wilson, Dr. H. M., to be Assistant Resident Medical Officer at the Wellington Hospital, N.Z.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

NEW SOUTH WALES.

Bell, Harry Charles Rikard, M.B. (Syd.), 1904.
Brydon, Adam Gibson, M.B., Ch.B. (Edin.), 1900.
Browne, Claude Seccombe, M.B. (Syd.), 1904.
Godsall, Robert Spencer, M.B. (Syd.), 1904.
Mawson, William, M.B. (Syd.), 1904.
Rome, John Arthur Denzil, L.R.C.P. (Edin.), 1903; L.R.C.S. (Edin.), 1903; L.F.P.S. (Glasg.), 1903.
Sharp, Granville Gilbert, M.B. (Syd.), 1904.
Vernon, Murray Menzies, M.B. (Syd.), 1904.

For Additional Registration.

Corfe, Anstruther John, Ch.M. (Syd.), 1904.

SOUTH AUSTRALIA.

Ashton, Thomas Badge, M.B., B.S (Adel.), 1903.
Birks, Melville, M.B., B.S. (Adel.), 1903.
Hayward, Lionel Wykeham, M.B., B.S. (Adel.). 1903.
Stuckey, Edward Joseph, M.B., B.S. (Adel.), 1903.

Additional Qualification.

Formby, H. H., B.S. (Melb.), 1901; M.R.C.S., F.R.C.S. (Eng.), 1903; L.R.C.P. (Lond.), 1903.

TASMANIA.

Elkington, J. S. C., L.R.C.P. (Edin.), L.R.C.S. (Edin.), L.F.P.S. (Glasg.) 1896, M.D. (Brux.) 1901, D.P.H., R.C.S. (Eng.), R.C.P. (Lond.) 1902.

BIRTHS, MARRIAGES AND DEATHS.

BIRTHS.

BICKLE.—On January 11th, at Warra Warra, North Terrace, Adelaide, the Wife of L. W. Bickle, F.R.C.S. (Edin.)—a son.

DOUGLAS.—On January 20th, at Victor Harbour, the wife of F. J. Douglas—a daughter.

GETHING.—On January 18th, at Port Adelaide, the wife of Dr. W. J. Gething—a son.

HUGHES.—January 8th, at 418 Park-road, Sydney, the wife of M. O'Gorman Hughes, M.B.—a daughter.

LITTLEWOOD.—On January 3rd, at "Kanimbla," Rochester, Vic., the wife of F. E. Littlewood, M.B.—a daughter.

PALMER.—At her residence, Elizabeth-street, Hyde Park, the wife of Arthur Palmer, M.B., F.R.C.S. (Edin.)—a daughter.

MARRIAGES.

BATCHELOR — BUTTERWORTH. — At St. Paul's Pro-Cathedral, on January 8th, Ferdinand Stanley Batchelor, F.R.C.S., son of F. C. Batchelor, M.D., Dunedin, to Florence Jinnie Marguerite Butterworth, daughter of the late J. L. Butterworth.

McARA—STEWART.—On November 17th, 1903, at Queen-street, Dunedin, William McAra, M.B., of Gore, to Gertrude Calcutt, eldest daugher of Thomas Stewart.

McILROY—McEWEN.—On December 10th, at Dunedin, Alexander Joseph McIlroy, M.B., C.M. (Edin.), Ophir, to Margaret Agatha (Cis.), daughter of Neil McEwen, Queenstown.

PHIPPS—JOHNSON.—On November 25th, 1903, at St. Mary's, Sydney, by the Rev. S. C. Cregan, John Hare Phipps, M.B. (Lond.), eldest son of the late G. C. Phipps, M.D., of Oxford-road, Manchester, and Mrs. Phipps, Passage, West Cork, Ireland, to Margaret J. Routledge, eldest daughter of W. N. Johnson, Esq., Clarens, Wallsend, N.S.W.

DEATHS.

MALIN —On December 4th, at Royal Prince Alfred Hospital, Sydney, Stanley Arthur (medical student of Sydney University), second beloved son of Sydney and Mary M. Malin, aged 25 years.

ROBIN.—On January 2nd, suddenly, at Mossmans, Queensland, Vincent J. Robin, M.B., M.R.C.S., youngest son of the late James Robin, of Adelaide.

LETTERS AND OTHER COMMUNICATIONS HAVE BEEN RECEIVED FROM:—

Dr. J. Adam Dick, Randwick; Dr. T. Borthwick, Adelaide; the Town Clerk, Adelaide; Dr. R. Worrall, Sydney; Dr. W. H. Lang, Corowa; Messrs. Burroughs, Wellcome & Co., London; Dr. E. W. Binney, Sydney; Dr. H. S. Newland, Adelaide; Hon. Sec. Victoria Medical Defence Society, Melbourne.

BOOKS RECEIVED.

A Pocket-Book of Clinical Methods. By C. H. Melland, M.D. (Lond.), M.R.C.P., Physician to the Ancoats Hospital, Manchester. Bristol: John Wright & Co. London: Simpkin, Marshall & Co. 1903.

The Physiognomy of Mental Diseases and Degeneracy. By James Shaw, M.D. Bristol: John Wright & Co. London: Simpkin, Marshall & Co. 1903.

Catechism Series.—Physics, Part II. Edinburgh: E. & S. Livingstone. Price, 1s net.

Squint Occurring in Children: An Essay. By E. A. Browne, F.R.C.S., Lecturer on Ophthalmology, University of London, assisted by E. Stevenson, M.D., M.Ch. (Aberd.), Demonstrator of Ophthalmology, University, Liverpool. London: Baillière, Tindall, & Cox. Sydney: L. Bruck. 1904.

Practical Points in Nursing for Nurses in Private Practice. By Emily A. M. Stoney. Third edition revised. Philadelphia, New York, and London: W. B. Saunders & Co. 1903. Melbourne: Jas. Little. Price, 9s.

Pathological Technique. By F. B. Mallory, M.D., Assistant Professor of Pathology, Harvard University Medical School, and J. W. Wright, M.D., Director Clinico-Pathological Laboratory, Massachusetts General Hospital. Second edition. Octavo. Philadelphia and London: W. B. Saunders and Co. 1901. Melbourne: Jas. Little. Price, 15s.

Sexual Impotence: Its Pathology and Treatment. By V. G. Vicki, M.D. Third edition. 12mo. Philadelphia and London: W. B. Saunders & Co. 1901. Melbourne: Jas Little. Price, 10s.

The American Text-Book of Obstetrics, for Practitioners and Students. Edited by C. Norris, M.D. Vol. II. Second edition revised. Philadelphia and London: W. B. Saunders and Co. 1903. Melbourne: Jas. Little.

A Text-Book of Operative Surgery. By W. S. Beckham, Ph.M., M.D., Assistant Instructor in Operative Surgery, College of Physicians and Surgeons, New York. Philadelphia and London: W. B. Saunders & Co. 1903. Melbourne: Jas. Little. Price, 30s.

A Text-Book of Obstetrics. By J. C. Webster, M.D. (Edin.), F.R.C.P., F.R.S.E., Professor of Obstetrics and Gynæcology, the Rush Medical College, University, Chicago. Philadelphia and London: W. B. Saunders & Co. 1903. Melbourne: Jas. Little. Octavo. Price 25s.

A Text-Book of Diseases of Women. By H. I. Garrigues, M.D. Third edition. Philadelphia and London: W. B. Saunders and Co. 1901. Melbourne: James Little. Price, 22s. 6d.

Saunders' Pocket Medical Formulary. By W. M. Powell, M.D. Sixth edition. Philadelphia and London: W. B. Saunders and Co. Melbourne: Jas. Little. Price, 10s.

The Sterilisation of Urethral Instruments. By H. T. Herring, M.B., B.S. London: H. K. Lewis. 1903. Price, 5s.

Transactions of the Royal Academy of Medicine in Ireland. Vol. XXI. Edited by J. B. Story, M.B., F.R.C.S.

The British Journal of Inebriety. Edited by T. N. Kelynack, M.D., M.R.C.P. London: Baillière, Tindall & Cox. Price, 1s net.

HUDSON'S "EUMENTHOL" JUJUBES (Registered) are a Gum Jujube containing the active constituents of well-known Antiseptics, Eucalyptol, Thymus Vulg., Pinus Sylvestris, Mentha Arv., with Benzo-Borate of Sodium, etc., and exhibit the antiseptic properties in a fragrant and efficient form. Sold by all chemists; tins, 1s 6d. Are Antiseptic, Prophylactic, reduce Sensibility of Mucous Membrane. Mr. W. A. Dixon, F.I.C., F.C.S., Public Analyst of Sydney, after making exhaustive tests, says:—"There is no doubt but that 'Eumenthol' Jujubes have a wonderful effect in the destruction of bacteria and preventing their growth. . . . I have made a comparative test of 'Eumenthol' Essence and Creosote, and find that there is little difference in their bactericidal action."—[ADVT.]

AUSTRALASIAN MEDICAL GAZETTE.

AN INTRODUCTION TO MODERN THEORIES OF IMMUNITY.[*]

By D. A. Welsh, M.A., M.D. (Edin.), Professor of Pathology, University of Sydney.

PART I.—EHRLICH'S THEORY OF TOXINS AND ANTITOXINS.

IN the development of any science there comes a time when a good working hypothesis is of more value than a multitude of fresh facts, and, but a few years ago, bacteriology began to experience this need. It had made unexampled progress as a descriptive science. It had been of inestimable service to mankind in determining the actual agents of most infective diseases, and in thus indicating means of prevention. It had accumulated a somewhat chaotic mass of facts regarding the production of immunity, but further advance in this direction was particularly hampered for lack of an illuminating theory. Ehrlich, however, supplied the deficiency, and explained the phenomena of immunisation by reference to inter-molecular reactions. The development of his theory constitutes one of the most logical and masterly contributions ever made to pathology. It offers a consistent explanation of nearly all the most important facts; it has proved fertile in suggesting fresh discoveries, and it contains the promise of more.

1. *Relation of Toxin to Antitoxin.*—Ehrlich was led at an early stage of his work on toxins to conclude that the interaction of toxin and antitoxin is of a chemical nature, and this conception of the relation of toxin to antitoxin is fundamental to his whole theory. When brought into contact outside the body, the two substances appear to combine, so that the mixture is harmless on subsequent injection. Ehrlich noted that the reactions of toxin and antitoxin are subject to the general laws of physical chemistry — that the process is accelerated by warmth and retarded by cold, that it proceeds more rapidly in concentrated than in dilute solution. Hence he inferred that antitoxin neutralises toxin much in the way that an alkali neutralises an acid. The opponents of this theory maintain that there is no such interaction, that the process is purely physiological, and that, when toxin and antitoxin are present together in the animal body, the latter stimulates the tissues to resist the toxin. The evidence once quoted in support of this physiological relationship is now largely discredited, while on the contrary all the facts are in favour of the chemical view.

Important corroboration was afforded by the work of Martin and Cherry on snake venom, which resembles bacterial toxin in developing an antitoxin on injection. They compared the behaviour of toxin with that of antitoxin when filtered under pressure through gelatine, and found that toxin molecules could readily pass, while antitoxin molecules could not. Hence from a mixture of toxin and antitoxin it was thus possible to separate any free toxin that might be present. By filtering such mixtures at different intervals it was found that the longer the toxin remained in contact with antitoxin the less free toxin was obtained in the filtrate, until after a certain time no toxin appeared, and the fluid left behind was innocuous, the inference being that a complete chemical union had occurred between toxin and antitoxin, and that time was an important factor as in other chemical processes. Incidentally these experiments also show that the molecule of antitoxin is larger than that of toxin, and probably, therefore, that the antitoxin is not a derivative or modification of the toxin molecule.

Ehrlich supports his view by reference to the action of ricin, which has the property of disintegrating red blood cells. Repeated administration of suitable doses, however, confers immunity, and in the blood serum of the immune animal there appears an anti-body (anti-ricin) which counteracts the toxic effect of ricin, and thus corresponds to an antitoxin. Now both the disintegrating effect of the ricin and the protective action of the anti-ricin can be demonstrated in test tubes containing susceptible blood corpuscles as well as in the animal body. Hence it is not possible to assume a purely physiological reaction between ricin and anti-ricin.

Again, Morgenroth has shown that, if the milk-curdling ferment, rennin, be injected after the manner of an immunisation experiment, the serum of the animal acquires the power of protecting milk against the action of the rennin, that is, an anti-rennin is produced. Obviously milk is a substance incapable of physiological reaction, and it is hard to explain the antagonism of rennin and anti-rennin except on the basis of a chemical union. In all probability, therefore, the reaction between such analogous bodies as toxins and antitoxins also depends on chemical rather than on physiological processes, and that is the first step in Ehrlich's theory.

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[*] Part of this paper formed the substance of an address to the Medical Society of the University of Sydney, and it has been published in its present form in the hope that it may be of service to those who are interested in recent developments of pathology, but have not leisure for wider reading. I have endeavoured to present the subject as free as possible from technicalities of expressions, and to avoid that *bizarre* terminology which only too successfully bewilders and repels the unaccustomed reader. In so doing I am only following the excellent example of Ehrlich, whose Croonian Lecture on Immunity, done into English by Bashford, is a model of lucid exposition and simple language. To this lecture, and to a recent review of current theories by Ritchie in the *Journal of Hygiene*, I am very materially indebted.

But, if toxin and antitoxin combine after the manner of, say, an acid and an alkali, that is, subject to certain principles of physical chemistry, the interaction must be governed by the other general laws which govern all chemical processes. In particular, they must react with one another in definite equivalent quantities, just as a fixed and definite quantity of a given alkali will combine with a fixed and definite quantity of a given acid. Now a most interesting obstacle arose. This fundamental principle of chemical action appeared not to hold in the case of toxin and antitoxin.

You may ask how it is possible to make exact numerical determinations of such elusive substances, since neither toxin nor antitoxin are known in pure condition. Yet it is possible to attain remarkably exact measurements, particularly in the case of diphtheria. The toxin is measured simply in terms of its toxicity—the unit of toxic action, or the "minimum lethal dose," being that amount which exactly suffices to kill a given animal of given weight within a given time, *e.g.*, a guinea-pig weighing 250 grammes in the course of four days. Similarly, the strength of an antitoxin is measured in terms of its capacity for neutralising toxin, the antitoxic unit, or, as it is called, the "immunity unit," being that amount of the serum of an immunised animal which will exactly neutralise 100 M.L.D. of toxin, so that when toxin and antitoxin are mixed outside the body and allowed to stand for half an hour, inoculation of a guinea-pig with the mixture will produce no symptoms.

When Ehrlich came to test the toxicity of different samples of diphtheria toxin by means of the immunity unit, determined for one particular toxin, he was met by the unexpected result that of one toxin perhaps 20, of a second perhaps 50, and of yet a third perhaps 130 minimal lethal doses were saturated by one immunity unit. Remember that one immunity unit ought to satisfy the affinities of exactly 100 M.L.D. Hence, at first sight, it appeared that toxin was not neutralised by antitoxin in equivalent proportions. But this apparent contradiction of the chemical theory became explained when the same sample of toxin at different periods of time was compared with an antitoxin of constant potency. It was found that one immunity unit exactly neutralised, say, *x*cc. of toxin when freshly prepared, and that this quantity represented 100 M.L.D. But, when the same toxin was tested after a considerable time, the remarkable fact was discovered that exactly *x*cc. of the toxin were again neutralised by one immunity unit, but that this quantity now represented only, say, 50 M.L.D. Hence the older toxin had lost much of its virulence, but none of its combining affinity with antitoxin. It had long been known that the toxin was an unstable body which tended to lose its toxic properties on being kept; but the further fact that it might still require the same amount of antitoxin for complete neutralisation had not previously been observed.

Now, from a chemical standpoint, this apparent discrepancy was easily explained by assuming that in the complete toxin molecule there are two chemical affinities, such as occur in many bodies known to organic chemistry, and that the one can combine with a corresponding affinity in the antitoxin molecule, while the other can exert a poisonous action on the tissues. For convenience, Ehrlich designates the combining group "haptophorous," and the toxic group "toxophorous." The instability of the toxin on being kept is therefore due to the unstable character of the toxophore group, and the constancy of its combining capacity for antitoxin is due to the greater relative stability of the haptophore group.

In any crude toxin there are entire toxin molecules in which both affinities are preserved, and degenerate toxin molecules in which the purely toxic affinity has been lost while the combining affinity is retained. For such degenerate molecules the term "toxoid" was introduced by Ehrlich, and the changes in constitution of a crude toxin, through lapse of time or otherwise, might be represented by saying that the true toxin molecules progressively decreased in number while the toxoids correspondingly increased.

To sum up, then, the chemical view of the interaction between toxin and antitoxin has led to the further theory that in the ultimate toxin molecule there are two chemical affinities, one atom group being capable of saturation by antitoxin, while the other atom group is capable of toxic action. Let us next consider how far this theory is borne out by other facts, and in particular what explanation it can offer of the nature of toxic action on the tissues, and of the origin of antitoxins themselves.

2. *Relation of Toxin to Tissue.*—We have now to consider the series of experiments quoted by Ehrlich in illustration of the nature of the action exerted by toxins upon tissues, and then to discuss the bearings on his theory, of the

facts ascertained, noting in particular to what extent his hypothesis is consistent with, or reinforced by, the experimental data.

(*a*) If a suitable dose of tetanus toxin be injected into the vein of a rabbit, then no immediate result appears. An appreciable and often considerable time, many hours for example, may elapse between the introduction of the toxin and the onset of toxic symptoms. But, once the characteristic spasms appear, they gradually increase in violence until they end in death. This further fact is of importance that the toxic symptoms can be shown to be due to the selective action of the toxin upon the central nervous system, and the consequent derangement of certain nerve cells.

(*b*) If a rabbit receives into its circulation a minimum lethal dose of tetanus toxin, and as soon as possible thereafter has all its blood replaced by transfusion, it will nevertheless succumb to tetanus just as if no transfusion had occurred (Heymans). Therefore, in the brief interval of time occupied by the transfusion, the whole of the minimum lethal dose had escaped from the blood stream into the tissues.

(*c*) If a rabbit receive a moderate dose of tetanus toxin, say 12 M.L.D., and immediately thereafter the equivalent neutralising dose of antitoxin, then no symptoms result, the explanation being that the antitoxin is still able to saturate the affinities of the toxin before it has reached the tissues. When, however, the exact neutralising dose of antitoxin is introduced not immediately, but seven or eight minutes after the injection of the toxin, then death occurs from tetanus just as if no antitoxin had been given (Dönitz). Hence, within these few minutes, a dose of toxin equivalent to at least one minimum lethal dose must have passed out of the vessels and become fixed in the tissues.

(*d*) Further experiments showed that although the toxin had passed out of the blood stream, it could still be neutralised by antitoxin, provided that the quantities of antitoxin introduced were larger than the exact neutralising dose, but that, the longer the interval that elapsed between the injection of toxin and of antitoxin, the greater was the amount of antitoxin required to prevent death, so that many thousand times the exact neutralising dose of antitoxin might have to be given. Further, after a certain lapse of time, varying to some extent with different animals, and depending also on the initial dose of toxin, but in certain circumstances not exceeding half an hour, no amount of antitoxin was able to neutralise the fatal effects of the toxin. In particular, if tetanic symptoms had set in, however slightly, before antitoxin was given, then only a very small proportion of animals could be saved by the most powerful antitoxin even in enormous doses.

I may parenthetically remark that in these facts we have an explanation of the frequent failure of antitoxin to avert death in cases of tetanus in man, since many hours often elapse after the onset of symptoms before antitetanic treatment can be undertaken. We have the further indication for treatment that relatively enormous doses of antitoxin are required, and that the first should be injected without the loss of a single minute. It is essential to remember that there is this important distinction between diphtheria and tetanus—the two diseases in which the action of the toxin predominates, and in which, therefore, antitoxic treatment should be most beneficial—that the presence of diphtheria bacilli is evidenced by a local lesion in the fauces usually of a characteristic form, and that the bacilli may thus be identified by bacteriological means before the graver symptoms of the malady have set in, whereas in tetanus the local effects of the bacilli are most insignificant, and the site of inoculation therefore presents no appreciable difference from an ordinary septic wound or slight abrasion. Hence it is exceedingly seldom that there is any indication of the presence of tetanus bacilli until tetanic symptoms actually set in, when it is not only unnecessary but highly disastrous to wait for a bacteriological report. These are practical details of the utmost importance, but we must now return to the discussion of the scientific principles that underlie the facts already noted.

When tetanus toxin is injected into the circulation it becomes within a few minutes anchored to certain cells of the central nervous system, but does not for several hours begin to exert any toxic effect. On the theory that the toxic molecule possesses two independent chemical affinities, this is easily explained by saying that the combining affinity of the toxin molecules has met a corresponding affinity in molecules of the cell protoplasm, and has been saturated by it, just as it would be saturated by the antitoxin molecule, but that the toxophorous affinity does not so readily enter into chemical union with suitable atom groups of molecules of the cell protoplasm, and only later begins to exert its poisonous action and to disturb metabolism.

In support of this application of Ehrlich's theory we must recall the fact that we have seen strong evidence of a chemical union between toxin (by its haptophore atom group) and antitoxin, and that when the exact neutralising dose of antitoxin is injected, say ten minutes after the toxin, it is not possible to dislodge the toxin molecules from their union with the tissue elements; in other words, the chemical affinity which we know to exist between toxin and antitoxin has been resisted by an affinity at least as powerful between toxin and tissue, and presumably, therefore, both are chemical. This explanation is quite consistent with the further fact that, when not the exact neutralising dose of antitoxin but an enormously greater amount is administered, it is possible, within certain limits of time and in certain conditions, to dissociate the bulk of the molecules of toxin from those of the cell protoplasm. When relatively few toxin molecules in combination with tissue molecules are brought into contact with a relatively great number of antitoxin molecules, then, even if the chemical affinity of toxin for tissue molecule is slightly greater than that of toxin for antitoxin, nevertheless what is known as the mass action of the multitude of antitoxin molecules would result in the transference of toxin molecules from tissue to antitoxin, and in presence of sufficient excess of antitoxin so much toxin might be thus transferred that less than the minimum lethal dose would be left in chemical union with the tissues, and recovery would become possible.

Take an example from organic chemistry (Ritchie). Hæmoglobin has a greater affinity for carbon monoxide than it has for oxygen; in other words the compound CO-hæmoglobin is more stable than the compound oxy-hæmoglobin; but, if a small quantity of CO-hæmoglobin be brought into contact with a large excess of oxygen, then a considerable proportin of oxy-hæmoglobin may be formed. Now for "hæmoglobin" read "toxin," for "carbon monoxide" read "tissue," for "oxygen" read "antitoxin," and you have the argument in a nutshell. Indeed, it affords additional proof that the union between toxin and tissue is of a chemical nature, since the power of dissevering toxin from the central nervous system is possessed only by the specific antitoxin. The conclusion is inevitable that, if the union between toxin and tissue can be overcome only by means of a specific chemically antagonising agent, then it must itself depend upon a chemical interaction (Ehrlich).

Next consider the selective action of toxin on the tissues and its distribution in the body. Here again, for sake of precision, let us confine our attention to tetanus. It has long been known that the violent muscular spasms of tetanus are due to toxic interference with the metabolism of certain cells of the central nervous system But it is a condition of toxic action that the toxin molecule should become fixed to protoplasmic molecules of susceptible cells, and, if this be translated into our present terminology, it simply runs that certain nerve cells possess atom groups resembling those of antitoxin in having a chemical affinity for the combining (haptophorous) atom group of tetanus toxin. But this is not the whole truth. There is evidence that such toxophile atom groups exist in cells other than those of the central nervous system. In the guinea-pig the same dose of tetanus toxin is fatal whether it is injected directly into the brain or into the subcutaneous tissues, whereas in the rabbit the lethal dose is twenty times greater when administered subcutaneously than when injected into the brain (Roux). This can be explained only by saying that in the guinea-pig the tetanophile atom groups are essentially confined to the central nervous system, whereas in the rabbit they are present in other organs also, so that, when the toxin is injected directly into the brain, the toxophile atom groups there present at once seize on all the toxin, and the whole dose, therefore, becomes effective, while, when toxin is conveyed through the lymph and blood streams, the toxophile groups in other tissues take up the toxin in equivalent proportions, so that, as a matter of fact, only one twentieth part becomes effective. It had previously been noted that, when nearly neutral mixtures of toxin and antitoxin are given to the rabbit, death occasionally results not from tetanus but from a peculiar form of wasting, which has been designated "tetanus sine tetano" (Dönitz). Even in animals like the alligator and the domestic fowl, which are naturally quite immune to tetanus, there is evidence that tetanus toxin on injection becomes fixed in the tissues, presumably not in the central nervous system (Metchnikoff). We must, therefore, conclude that, although tetanus toxin may, and in some animals does, unite by its haptophorous affinity with molecules of many different cells in the body, yet it is only in certain cells, except in very exceptional circumstances only in cells of the central nervous system, that the toxophorous affinities are able so to derange metabolic processes as to produce lethal effects.

Ehrlich draws attention to the different forms of cell metabolism, and to differences in the behaviour of molecules of cell protoplasm to molecules of extraneous matter. Certain substances, particularly food stuffs, are able to enter into intimate chemical union with protoplasm, and by a process of synthesis to become incorporated into its molecular constitution, so that it becomes impossible to sever the combination or to recover the food stuff from the protoplasm by any process of extraction by indifferent solvents, whereas other substances, notably alkaloids and pharmacological agents generally, though they are still able to exert a powerfully toxic action on metabolism, have not the capacity of intimate chemical union with the cell protoplasm, of which, therefore, they never come to form an integral part, and from which they may with comparative ease be dissociated by simple extraction, as by alcohol, acetone, and other reagents, or even by mere mechanical shaking. Ehrlich, therefore, assumes that such bodies as alkaloids do not possess chemical affinities capable of saturation by corresponding affinities in tissue molecules, and with this disability he correlates the fact that they are unable to produce specific anti-bodies on injection—anti-strychnine, for example, being unknown. Hence he concludes that only certain substances, foodstuffs in particular, can enter into chemical union with the tissues in the sense previously defined, and for this purpose the tissue molecules must be furnished with certain atom groups whose function is to combine with the corresponding atom groups of foodstuffs essential to tissue nutrition.

Now we must disabuse our minds of too rigid a conception of the cell. We must not regard it solely as a morphological unit with certain intricate details of structure, but we must regard it from the chemical standpoint, and recognise that its protoplasm has a most complex molecular constitution. Ehrlich suggests that cell protoplasm, for example, consists of a central disposition of molecules, and that each tissue molecule is equipped with nutritive side chains (atom groups) which possess a certain degree of independence and which differ from one another according to the requirements of different tissues. Since these side chains, or atom groups, of tissue molecules are specially designed to combine with or receive the corresponding atom groups of foodstuffs, they may fittingly be termed "receptors"; in other words, the tissue molecules possess receptors for molecules of foodstuffs.

Now, though we know very little of the chemical constitution of toxins, all that we do know points to their being closely related to proteids, standing, therefore, not far removed from a most important group of foodstuffs. It would not be surprising then, as Ehrlich remarks, that they should possess a combining atom group corresponding to that of a foodstuff. To make a long story short, the next step in the theory is that the haptophore (combining) atom groups of the toxins have a special affinity, not only for antitoxins, but for certain receptors (side chains) of the cell protoplasm which normally are concerned with fixing molecules of foodstuffs. Remember that alongside this combining (haptophore) atom group which fixes them to the cell protoplasm, the toxins possess also a second group which in regard to the cell is not only useless but injurious—the toxophore atom group.

You may say it is all very well to build up a theory in this way: but how are we to put this wild hypothesis to the test of fact? Let us suggest a crucial test. You remember that, in estimating the efficacy of antitoxin, we spoke of mixing the toxin and the antitoxin in suitable proportions, allowing the mixture to stand for a short time, and then injecting the mixture into an animal. If no result followed, we inferred that the toxin had been completely neutralised by the antitoxin, and this we explained by saying that the combining (haptophorous) affinity had been saturated by the corresponding affinity in the antitoxin, so that the toxin was unable to become fixed to the tissue cells, and thus to become effectively toxic. But now we have gone on to say that certain tissue molecules possess receptors (atom groups) which resemble the atom groups of antitoxin molecules in having a maximum chemical affinity for toxin. If this be so, then these tissue molecules should be able, when mixed with toxin outside the body, to saturate the combining affinity of the toxin so that the mixture on injection should be perfectly harmless; in other words, if the tissue molecules have the same affinity for toxin molecules that antitoxin has, then they should be capable, equally with antitoxin, of neutralising toxin outside the body. Take the case of tetanus again. We have seen evidence that in the guinea-pig tetanus toxin is fixed entirely in the brain, and not at all in the other tissues of its body. Hence, if the theory is correct, a mixture of tetanus toxin and guinea-pig brain should be as harmless as a mixture of tetanus toxin and antitoxin, and a mixture of any other organ of the guinea-pig with tetanus toxin should be as toxic as ever. That is precisely what does take place. When tetanus toxin is mixed with broken-down guinea-pig brain, the toxin is so anchored or fixed by the cerebral tissues that inoculation with the mixture is innocuous (Wassermann and Takaki). There is some difficulty in determining exactly what has taken place in these circumstances, but the most obvious explanation is that the combining affinities of the toxin molecules have been saturated by the corresponding affinities in molecules of cerebral tissue, and have thus been deprived of effective toxicity. Hence, as the theory had led us to expect, the brain of a normal guinea-pig does act as an antitoxin. Further, an emulsion of other organs of the guinea-pig is unable to bind the toxin molecules, so that the mixture remains toxic on injection. Obviously such facts as these lend very strong support to the theory which Ehrlich has put forward.

3. *Relation of Antitoxin to Tissue.*—Consider next what explanation of the origin of antitoxin is possible on this theory. We have seen that the first condition of toxic action is the possession by susceptible tissue molecules of receptors (side chains) capable of fixing toxin molecules to them. Without such receptors the cell, or tissue molecule rather, is naturally immune. The union of toxin molecules with the receptors of protoplasmic molecules, when it does occur, is both strong and lasting, and, while it endures, the receptor cannot exercise its normal function—the fixation of nutritive molecules. It is, for the time being, rendered useless and inert, in other words, a defect has been produced, and, according to a general biological law, this must be repaired by regeneration (Ehrlich). The law still holds even when mere atom groups (receptors) of protoplasmic molecules are rendered useless by the fact that toxin molecules have become anchored to them, and, therefore, fresh receptors are formed by the cell to replace those put out of action by the toxin. If now additional quantities of toxin gain access to the cells, as in the process of immunisation, experimental or natural, then the freshly formed receptors become in turn saturated by the toxin, and a second process of regeneration is called forth. And, as the doses of poison increase, so the receptors are regenerated in increasing numbers. Then another biological law comes into operation, since, when regeneration occurs in response to repeated stimulation, the resultant compensation tends to proceed far beyond the necessary limit—indeed, over-compensation is the rule (Ehrlich). There, therefore, comes a time when this persistent and progressive regeneration of receptors reaches an excess. The receptors are produced in numbers too great for the cell (protoplasmic molecule) to carry, and are very properly jettisoned—thrown off after the manner of a secretion into the blood and body fluids. Thus, as a result of repeated toxic action, the blood becomes full of free atom groups—the cast-off receptors of susceptible cells regenerated in excess—and these atom groups in the circulating blood have a chemical affinity for the combining atom groups of toxin molecules. But this is precisely the characteristic of the antitoxin molecule, and, therefore, we have come to this, that antitoxins represent nothing more or less than these cast-off receptors of susceptible cells regenerated in excess, and appearing in a free state in the blood and body fluids.

This theory of the origin of antitoxins affords an explanation of many otherwise obscure details in the production of immunity. In the first place, although I have spoken of antitoxin being represented by the cast-off receptors of susceptible cells, you are not to suppose that the toxic action of the toxin is the essential factor in the formation of antitoxin. On the contrary, the influence of the toxophore atom group is detrimental to the processes of cell life, it disturbs the regeneration of the lost receptors, and therefore impedes, if it does not entirely arrest, the formation of antitoxin. Hence, in a severe infection, when bacteria are elaborating large quantities of a highly virulent toxin, the cells on which the poison acts may be rendered quite incapable of antitoxin formation, and the patient rapidly succumbs. The highest degree of immunity, as a matter of fact, is attained by those animals in which the administration of toxin has been very cautiously begun, and in which the subsequent doses have been so carefully regulated that no symptoms of illness have appeared even when the animal receives many times the minimum lethal dose.

It is not the poisoning but the combining affinity of the toxin that stimulates antitoxin formation, so that the production of immunity depends, not upon the reaction of cells which are susceptible to toxic action, but upon the reaction of cells which are capable of fixing the toxin. It is the fixation of the toxin that determines the formation, and, therefore, antitoxin is formed by all those tissues whose cells possess toxophile atom groups. In the guinea-pig antitoxin is formed only in the central system, since the toxin is fixed by no other tissue. In the rabbit the great bulk of its antitoxin is formed in other organs, since only a small proportion of toxin is fixed in the brain. Indeed, we have the further remarkable fact that animals like the alligator, which are naturally quite immune to tetanus, may yet be made to yield a supply of antitoxin, simply because the tissue elements are capable of fixing the toxin, though quite insusceptible to its poisonous action (Metchnikoff).

We can go still further, however, in this application of the theory. If the toxophore atom group is useless, or worse than useless, in the production of antitoxin, if only the haptophore group is of any avail, then clearly, molecules of toxin in which the former group is destroyed, but the latter group persists, ought to be even more effective in stimulating the formation of antitoxin. You remember that such mutilated toxin molecules exist in old samples of crude toxin and are known as toxoids. Injection of toxoids then ought, on our theory, to be at least as effective as the injection of toxins in producing a high degree of immunity. And this is found to be the case. Indeed, not only can immunisation be successfully effected by the use of toxoids in the place of toxins, but in the case of highly susceptible animals immunity is more readily attained by the administration of toxoid alone. For the effect of toxin is partly to derange metabolism, and so to interfere with the vital reaction of the tissues on which the formation of antitoxin depends, whereas the effect of toxoid is to stimulate the production of antitoxin without impairing tissue vitality.

To assist the realisation of these phenomena, Ehrlich quotes Weigert's illustration from physical science. Iron, he says, attracts electricity, and is therefore used as a lightning conductor. But the mere presence of iron in a building, so far from acting as a protection against lightning, renders the building more liable to be struck. Only when the iron is so disposed that it conducts the lightning away does it confer immunity. Now, just in the same way the atom groups in tissue molecules that anchor the combining groups of toxin molecules play the part of the iron and attract toxin molecules to them. So that, if these toxophile atom groups remain in combination with the tissue molecules, then the toxin molecule is anchored to them and toxic action may follow. But, if the same atom groups are separated from the tissue molecules and meet the toxin molecule in the circulating blood or outside the body, then they act the part of the lightning conductor, attract the toxin to themselves, and thus render it harmless.

THE NOTIFICATION OF PHTHISIS.

By A. Jefferis Turner, M.D. (Lond.), D.P.H. (Camb.), Brisbane.

In opening this discussion, I do not think it is necessary for me to discuss the pathology of tuberculosis. This has been so frequently and ably dealt with in medical meetings and by medical journals that I should be wearying you with unnecessary repetition. I think I may assume that we are agreed that phthisis is a communicable disease, and that the chief agency in spreading it is the expectoration of phthisical patients.

I propose, therefore, to discuss the subject from the practical and administrative point of view. At the outset I would advance two propositions—firstly, that we are not entitled to demand State or municipal interference in matters of health unless we can prove that the evil to be remedied is one of sufficient importance to justify such action; and, secondly, that the action recommended should be necessary to diminish the evil.

The first condition is easily fulfilled. Pulmonary phthisis, or consumption—to adopt the popular name—is the disease which causes the largest mortality in Queensland, a mortality exceeding that of all the infectious diseases, recognised as such by the people at large, taken together. Of all deaths, 7·4 per cent.* are due to consumption. But this figure does not indicate the economic loss to the State. During the prime of working life (between the ages of 20 and 45) the proportion rises to 17·4 per cent., or nearly to one-fifth of deaths from all causes. Remembering that phthisis is a communicable disease, this is surely sufficient to justify us in demanding that it should be dealt with by our health authorities.

Consumption is not decreasing in this State; the mortality from this cause has undergone no diminution since 1895, and since 1899 there has been an increase. The proportion of deaths contributed by the native-born population has been steadily increasing, and is now about one-third. Of the immigrants who die from the disease little more than one-tenth do so within five years of their arrival, and nearly three-fourths die after ten years; so that it is evident that the great bulk of the cases are endemic, and that imported cases form only an insignificant proportion of the total mortality.

If consumption is to be dealt with by the health authorities in any systematic manner the disease must be made notifiable. This is no new departure, but a regulation already working satisfactorily in many places. A little practical experience is, in administrative matters, worth more than a great deal of theory.

A system of voluntary notification has been working for several years in some English cities; for instance, Manchester, Sheffield, Brighton. The administrative details of the system in force in Manchester are given in an interesting paper read before the International Congress held in London. All cases notified are entered by a clerk in two books, one arranged according to name, the other according to addresses. This makes it easy to see whether a case has been previously notified, and to trace successive occurrences of phthisis in the same house, or in adjoining houses. An assistant medical officer visits the home of the patient, and fills an inquiry form, which gives particulars as to the duration of illness, the condition of the house, exposure to infection of relatives or work-fellows, etc., and the measures of disinfection or cleansing required. The supervision of the house is kept up by health visitors from voluntary ladies' health societies, or in some instances by sanitary inspectors. A printed circular of instructions is distributed to the patients.

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*In all the percentages given the kanaka population has been excluded.

In New York, notification commenced in 1894, and was made compulsory in 1897. Pulmonary tuberculosis is not placed in the class of contagious diseases, which includes measles, scarlet fever, smallpox, etc., but is treated alone in a special section of the sanitary code, and declared to be a "communicable disease, dangerous to the public health." An inspector visits the premises and leaves a circular of instruction as to the measures which should be taken to prevent the spread of the disease, and makes such recommendations as to disinfection as may be necessary. These measures are taken in the case of lodging-houses, hotels, boarding-houses, tenement houses, etc. In private houses no action is taken, excepting as to registration, provided that the medical attendant gives the necessary instructions to the patient. The example of New York has been followed in Boston, Buffalo, San Francisco, Philadelphia, and other cities.

In Norway compulsory notification is in force in all cases of tuberculosis attended by discharge of tubercular secretions.

Compulsory notification of phthisis is now a working system in South Australia, Victoria and New Zealand.

In South Australia the 128th section of the Health Act of 1898 provides that "Every medical practitioner attending on or consulted by any person suffering from pulmonary tuberculosis shall, as soon as the fact becomes known to him, report the same to the local board of the district in which the person resides." The experience of this State should be specially valuable to us, and accordingly, some months ago, being troubled by doubts as to the practical working of compulsory notification, I wrote to Dr. T. Borthwick, Medical Officer of Health for the City of Adelaide. I received a very courteous and satisfactory reply to my queries. Dr. Borthwick writes that in his experience "there has been no difficulty in the administration, partly because we have always given medical men to understand that if they wish us not to interfere in regard to any special patient, we are willing to comply with their wishes, provided they undertake the responsibility of seeing that proper isolation and disinfection are carried out; and partly because the sections of the Health Act which apply to infectious diseases generally do not apply to this disease." In regard to another point, he adds: "My experience is that no hardship has accrued in the way of preventing early cases from obtaining work or lodgings. It is conceivable that administration without the necessary tact might lead to hardship, but I think this can and ought to be avoided."

Dr. Borthwick summarises the procedure in regard to notified cases as follows:—"The city employs a trained nurse, whose duties are to assist in the isolation and disinfection of all cases of infectious disease which remain in their own homes." On receipt of notification, "if the medical attendant expresses the wish that the patient should not be visited, we send him the printed instructions with the request that he will hand them to some responsible person in the house and see them carried out, and also that he will inform us of the patient's death or removal from the house. If the medical attendant raises no objection (and he rarely does so now) the city trained nurse visits the house, taking the printed instructions with her. She explains these to some responsible person, advises as to the necessary isolation of the patient, and shows how to make up and use disinfectants. Disinfectants are supplied free to all poor persons. The nurse keeps in touch with the case, visiting the house from time to time as her other duties will allow, and exerting an educational and supervising influence. In no single instance have her visits been resented—rather the contrary. She obtains particulars relating to the patient's history and surroundings, which are tabulated for my information, and I do not personally visit the case unless for special reasons." When a house is vacated by death or removal, the necessary disinfection is carried out either under the supervision of the nurse, or by a sanitary inspector.

I think I have brought forward sufficient evidence that notification is workable, and that by it measures can be adopted to prevent the dissemination of tuberculosis—measures which it is impossible to apply systematically without notification.

As regards the choice between voluntary and compulsory notification, I would advocate the latter. If notification is voluntary, the medical man will sometimes be placed in an embarrassing position. Compulsion is in this case rather a help than a stumbling-block, and will lead to a far more satisfactory system for the health officer, the medical man, and the public.

As to what steps should be taken by the health authority on receipt of notification, I do not think we need make suggestions. Notification is a working system in many places, and I have sufficient confidence in our health administration to believe it will be equally practicable here. No doubt, the administrators will be inclined to proceed slowly and cautiously in the first instance. With tactful and progressive administration advancing, *pari passu*, with a gradually awakened public opinion, I believe that the demon of consumption may be bridled and bitted and brought under control. But the indispensable foundation of any progress is, I am convinced, compulsory notification.

(Read before the Queensland Branch of the British Medical Association.)

A CASE OF TEMPORO-SPHENOIDAL ABSCESS OF OTITIC ORIGIN.

By A. J. Brady, L.R.C.P.I., &c., Hon. Surgeon Department for Diseases of the Ear, Nose, and Throat, Sydney Hospital.

H.C., male, aged 19 years, was seen on May 30th, 1903, by Dr. Macdonald Gill, who promptly recognising his condition sent him into the Sydney Hospital, where I saw him the same evening. There was a history of left middle ear suppuration of five weeks' duration. When examined on the operating table the patient was in a semi-conscious condition; he was moaning and crying out, particularly when disturbed by the examination. The pulse was 52, and respiration 11 per minute. Temperature, 98.4°. The evidence of intra-cranial pressure was convincing, and the necessity of immediate operation undoubted. Under chloroform anæsthesia the usual incision for the complete mastoid operation was made. The mastoid antrum was opened; it contained pus. With the gouge and hammer the opening in the bone was extended upwards, removing the superior wall of the bony meatus, and the tegmen of the attic and that of the antrum, thus exposing the brain in the floor of the middle temporal fossa, and in the immediate region of the source of infection. The needle of an exploring syringe, directed inwards and slightly backwards, gave exit to a syringeful of pus. The dura was now incised, and a sinus forceps introduced alongside the needle. By opening the forceps the brain substance was pushed aside. Very fœtid pus to the extent of about an ounce escaped. The cavity of the abscess was cleaned out with several strips of gauze, and a rubber drainage tube was inserted. There was an improvement during the following few days. The patient became more rational, and noticed his surroundings. He was, however, restless, and complained of pain in the head. This pain in the head was a constant symptom for about 17 days after the operation, and appeared to cause much distress. On the third day after the operation I very cautiously used a curette, and removed a number of gangrenous looking sloughs from the abscess cavity, which appeared very large and uncontracted. Severe head pain came on an hour or so later, and required morphia for its relief. Next day he was as usual. For a couple of weeks his condition appeared very critical. The continued slow pulse suggested intra-cranial pressure, although the drainage of the abscess was perfect. His head pain, and his restless irritable condition, suggested meningitis. The normal temperature was against the latter. The blood count, specimen taken on table :—Leucocytes, 18,000 per c.m m.; on 5th day after operation, 24,000 c.m.m.; on the 16th day, 9400 per c.m.m. Examination of eyes by Dr. Roland Pope, 5th day after operation :—Left eye optic disc very hyperæmic, slightly swollen, and margins indistinct; surrounding retina œdematous. Right very slightly affected on similar lines. Partial aphasia and word deafness continued for some time after the dangerous symptom had disappeared. He has since quite recovered from this condition. For a time he also said he could not see distinctly. Dr. Pope, July 2nd, reported great improvement in the state of the retina.

REMARKS.

The interesting feature of this case is the continuance of a slow pulse for about 17 days after the operation. For the first week it varied from 44 to 54 per minute; during the second week, 52 to 60. After this it gradually rose till, during the fourth week, it was normal. The patient was now well, and all danger was passed. During the period of slow pulse the abscess cavity was wide and patulous. There probably was a fairly large area of the brain affected by cerebritis, and this appears to have been the cause of the symptoms—pain, aphasia, slow pulse, etc. The case appears to prove the fact that intra-cranial conditions, other than pressure, may cause a marked slowing of the pulse, and that the latter symptom persisting after the evacuation of a brain abscess, is not always an indication of the necessity of further exploration.

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THE SITUATION OF CORPUS LUTEUM IN FOUR CASES OF ECTOPIC GESTATION.

By **Ralph Worrall, M.D. Ch.M. (Irel.) Hon. Gynæcologist, Sydney Hospital.**

From a physiological point of view these four cases seem to me of such interest as to warrant my taking up a few minutes of the time of the meeting. They illustrate a phenomenon concerning which but few observations have been recorded.

March 26*th*, 1903.—*Hannah, McG.*, No. 309. Symptoms of ruptured ectopic gestation; abdominal section; right tube gravid; the right ovary contained no corpus luteum.

Jan. 19*th*, 1903.—*Florence A.*, No. 288. Symptoms of ruptured ectopic gestation; abdominal section; right tube gravid; right ovary contained no corpus luteum; left. ovary enlarged; on incision it was found to contain a large corpus luteum.

Sept. 6*th*, 1903.—*Mrs. W. J.* Symptoms and signs of ruptured ectopic gestation; right tube gravid; right ovary transformed into a cyst; no trace of ovarian tissue or corpus luteum.

J. W., 28, a 1-para. Admitted to Sydney Hospital on Nov. 2nd, 1903; 9 days previously she was seized with very severe sudden pains in the abdomen, accompanied by vomiting. This gradually passed off, but returned with much greater intensity the day before admission, when she was found cold, and collapsed on the floor of her room.

Operation next day when partial reaction had occurred. The tissues were blanched, and the blood watery, the peritoneal cavity containing a great quantity of blood, chiefly fluid; there were no adhesions.

The rupture had occurred close to the left uterine cornu. The ovary on this side contained no corpus luteum, and was quite atrophied. On the other side, the ovary contained a large, fresh corpus luteum. The fimbriated end of the tube on this side was quite occluded.

It will be seen that in two of these cases the evidence was positive that the ovum came from the ovary on the opposite side to the gravid tube; and in the other two, as the ovary on the affected side contained no corpus luteum, it must have been in the ovary of the opposite side, and the ovum must in all four cases have reached the tube by internal migration across the uterine cavity, or by external migration across the pelvis. As in the last case referred to, the fimbriated end of the tube corresponding to the location of the corpus luteum was occluded, the migration in this case must have been external.

(Read before the New South Wales Branch of the British Medical Association.)

REMARKS ON SOME RHEUMATIC AFFECTIONS.

By H. Swift, M.D., Adelaide.

I meant to have brought down to this meeting a boy who had well-marked nodules on his elbows, knees, ankles and knuckles, but unfortunately for me—and perhaps I may say for us—but fortunately for him the nodules have almost entirely disappeared. By the general improvement in his condition, as well as in the resolution of the exudations, he rather detracts from the force of the assertion that I purposed making, viz., that the appearance of rheumatic nodules was of very grave significance, and that in the great majority of cases the prognosis was a very bad one, the patients going rapidly down hill to a fatal termination.

M. Meynet, of Lyons, was the first person to recognise that these nodules were of rheumatic origin, and that was in 1874. In 1875, Drs. Barlow and Warner noted their first case, and in 1881 brought forward statistics of several cases at the International Medical Congress. They there remarked that "these nodules, although unimportant in themselves, are nevertheless of serious import, because in several cases the associated heart disease has been found to be actively progressive," and that "such nodules belong strictly to the fibrous tissues, and in nature are probably homologous with the inflammatory exudation which forms the basis of the vegetation on a cardiac valve." They described them as occurring over bony prominences, in the deep fascia or attached to tendons, especially flattened out tendons, and occasionally the pericranium. Dr. Money described them as limited localised lumps of connective tissue, and stated that he found in these subjects nodular pericarditis, nodular endocarditis, and nodular pleurisy. They vary in size from that of a hemp seed to that of an almond. They can be readily felt under the skin, and are not tender as a rule, nor is the skin discoloured over them. The best way to detect them is to put the skin on the stretch by flexing the joint to its limit, when the nodules will stand out as white tumours, *e.g.*, they will be seen all round the circumference of the patella.

Notwithstanding the apparently favourable turn the case I have mentioned has taken, I wish to adhere to my statement that the appearance of these nodules is of serious import, and is generally associated with active endo- or peri-carditis, which will rapidly advance. During the past few months there have been three cases in the Children's Hospital; two of them are dead. I have seen a great number of patients with these nodules, and at the present time I cannot call to mind a single case that has completely recovered.

Great divergence of opinion has existed for many years as to the connection or otherwise of chorea with rheumatism. I was at one time brought into intimate acquaintance with two medical men, Dr. Sturges and Dr. Cheadle, who held diametrically opposite views. In Germany rheumatism was regarded as a small and trivial element in chorea, whereas in France chorea was held to be a mere manifestation of rheumatism. Observation of latter years has more and more tended to confirm this view of the Frenchmen, until, I think, that chorea is merely a symptom of rheumatism in the same way that endocarditis, pericarditis, general arthritis, certain erythemata, and tonsillitis are. The rapid development, with frequently rapid resolution, lead Garrod and other writers to doubt the embolic origin of chorea, and to attribute it rather to a temporary overgrowth of connective tissue in the nerve centres. Sir W. Gowers, in a recent lecture, remarks we are compelled to regard lumbago in particular, and muscular rheumatism in general, as a form of inflammation of the fibrous tissue of the muscles, and suggests the term fibrositis. As to the cause of this inflammation, or, if you will, fibrositis, general opinion has long been pointing in the direction of a microbe as the origin of infection; and two observers, Drs. Walker and Pyffel (of Luzie), have published a preliminary report to the effect that they have discovered a micro-organism peculiar to rheumatism which they call micrococcus rheumaticus.

As I have remarked, I have no doubt at all in my own mind from continual observation of the certain connection between chorea and rheumatism. In some cases you will find the incoördination of movement the predominant feature. In others, there will be loss of power, almost amounting to paralysis, with very little choreiform contraction, which may be very easily overlooked. (There is a boy in the Light Ward at the present time who is a good example of this paretic condition affecting his right arm and leg, and who is developing mitral disease.)

The course of events with the exact pathological conditions, in the development of rheumatic endocarditis, must be more or less theoretical. The exact sequence of events is problematical, but I have watched a great many patients with rheumatic arthritis—in some of whom chorea was well marked—and have observed the gradual onset of endocardial trouble, and have invariably found that the first noticeable derangement has been an irregularity in the rhythm. In 1884, whilst house physician at Great Ormond-street, I admitted over 60 children with chorea, having as many as fourteen in at the same time, and upon referring to my notes I find I remark that a very noticeable feature in these patients is that in the majority of cases there is on admission an irregular action of heart.

I have no doubt whatever on this point, and yet I see in Allbutt's system, Dr. Russell says: "*In some cases* it is irregular, *according to some observers*, owing to a veritable chorea of the heart"; and again, "apart from rapidity and *possibly* irregularity of action."

I have considered this irregularity due to choreiform contraction of the muscles of the heart. In some cases it is more marked than in others. We have all seen the spasmodic contraction of certain muscles of the hand remaining fixed for a second or two, to be followed by a general and rapid relaxation and contraction. So in the heart you hear a long systole, followed by a tumultuous action for a few beats, to be repeated again in a prolonged sort of spasm, and then several quick beats. The next event to be noted is a reduplication of the second sound, heard chiefly at the apex. In a day or two more a soft systolic bruit becomes audible, which frequently in the course of a short time emits a musical note. The murmurs are generally caused by vegetations or nodules on the edges of the valves, the exciting cause for their formation being perhaps the irregular action.

These organic bruits should not be confused with the hæmic murmurs that are so frequently to be found over the base of the heart due to the anæmia that these patients so generally show, and which quite disappear as the blood becomes richer in hæmoglobin.

As to the treatment of the chorea in days gone by, many different remedies have been vaunted as certain cures, *e.g.*, one line of treatment was to use nothing but aperients: these patients are usually constipated. Another was by the administration of iron, especially the perchloride, of which drug Sir George Paget was very fond. Arsenic has always been a popular remedy. Rest is generally advised, some even going so far as to enforce this by prolonged sleep. I think a rational line of treatment may be followed by a combination of the above methods, viz., rest in bed absolute if much movement or any signs of cardiac trouble; attend to the bowels, administer iron for the anæmia, and push arsenic to the physiological effects of the drug; or, instead of arsenic, in the early stages give salicylates and then arsenic and iron.

As a rule the physiological effects of the drug have to be produced before much benefit can be noted, but as soon as the coryza and slight gastric disturbance are noticed there is generally a marked amelioration of the symptoms. I have frequently given as much as twelve minims of Fowler's solution three times a day for some days without producing any discomfort. Noting the result of this mild poisoning, and also remembering the very great improvement these cases show if they happen to contract one of the exanthems, or to meet with some accident, I have wondered if we could not work a more rapid cure by administering large doses at once of some more or less harmless "alterative" drug.

(Read before the South Australian Branch of the British Medical Association.)

A CASE OF RHEUMATIC FEVER WITH CHOREA.

By A. H. Gault, M.D. (Lond.), Lower Mitcham, S.A.

THAT there is some relationship between rheumatism and chorea has long been known. It was pointed out by Dr. Bright as early as the beginning of last century, but it is not even now fully decided what the relationship is. Next to rheumatism comes chorea as a cause of endocarditis, and in practically all cases of fatal chorea marked endocarditis is said to be present.

Rheumatism very frequently occurs in patients who have chorea: it may be weeks or months before or concurrently or afterwards, but if all cases of rheumatism, even the mildest, are counted it is variously estimated that from 15 to 30 per cent. (Dr. Batten says 43 per cent.) of all cases of chorea show evidence of rheumatism. But the number of cases where rheumatic fever is directly complicated by chorea are sufficiently rare as to justify me in bringing this case before your notice this evening.

It is most likely that bacteriology will supply the connecting link between these two diseases, but we have heard of so many specific organisms for rheumatism that we cannot yet consider that finality has been reached. I might remind you of the researches of Drs. Poynton and Paine, which seemed conclusive, but they have yet to be verified. These observers say they have isolated a diplococcus from joints, pericardial fluid, and heart muscles of cases of acute rheumatism. These when injected into rabbits produce acute arthritis, endocarditis, and in some cases chorea, and from the affected tissues of these animals pure cultures of the diplococci can be obtained. Sections of brains of choreic animals, and of a patient who died of acute chorea, showed masses of these diplococci in connection with the small arterioles. If these bacteriological results are confirmed we will no longer look on chorea as a separate disease, but simply as a nervous manifestation of rheumatism.

The case I wish to bring before your notice this evening is that of C.R., a little girl, aged 9. Though a delicate, nervous child, she had always enjoyed good health. A week before she came under my notice she had been suffering from sore throat, presumably tonsillitis. When I first saw her she was suffering with ordinary symptoms of rheumatic fever, pain and swelling of knee and ankle joints; temperature 102°, pulse 100; soft systolic murmur audible at apex. She was at once given salicylate of soda gr. v. every 4 hours, but the rheumatic symptoms grew worse; temperature 103°, pulse 120; very restless, and in great pain. Larger doses of salicylate seemed to be effective; temperature fell, joints became less painful, but there was no improvement in general condition; and on the fifth day of the disease there were distinct twitchings of the hands, and difficulty of swallowing. She was then removed to a private hospital, and seen in consultation with Dr. J. C. Verco. The case became very serious, the chorea assuming an asthenic type; there was great difficulty in swallowing; inability to speak; complete paralysis of lower extremities; incontinence of urine and fæces, with marked emotional symptoms. The temperature remained 101°; pulse 140, weak and irregular; loud systolic murmur, only audible at apex. Rheumatic symptoms present, but slight. Only a very small quantity of liquid nourishment could be taken; nutrient enemata could not be given on account of incontinence. Salicylate of sod. gr. vii. with bromide of ammonium and injections of chloral for sleeplessness. In a few days the symptoms improved; temperature normal; pulse 120; choreic symptoms less active, but complete paralysis of speech and lower extremities remained. She remained thus for about a week, when the temperature began to rise, and a pericardial rub was heard over the base of the heart. For several days the condition grew worse; temperature 103°, pulse 150, weak and irregular. The cardiac area rapidly increased, and in three days the impulse was in the mid-axillary line, and dulness extended to the lower margin of second rib. This increased area was probably due almost entirely to cardiac dilatation, the impulse was diffuse and could be felt over a considerable area, and the sounds, though poor, were not muffled, quite agreeing with the conclusions of Drs. Lees and Poynton that the large increase of cardiac dulness in these cases is due to cardiac dilatation and not to the formation of pericardial fluid. Counter irritation was used, salicylate continued with small doses of liq. opii. and belladonna, and at the end of a week (4th) temperature was normal, pulse 120, general symptoms much better. Liq. arsenic, hydrochlor. and liq. strychnine were then given. The improvement was rapid, the child gained weight, and at the end of fifth week of illness she was able to say a few words and move her legs; choreic movements absent; pulse 100; cardiac impulse about 1¼ inches outside nipple line; loud mitral regurgitant murmur conducted to back, and indicating a gross lesion of mitral valve.

The child was then removed home, but for nearly six months was kept in the recumbent posture. Arsenic was continued for a time. After about six weeks there was a sharp relapse of rheumatic fever with some choreic movements, but it did not last long; but when I last saw her, before she left the State, she had a well-marked mitral murmur and the cardiac impulse was an inch outside the nipple line, and I have no doubt that there is a permanent heart lesion.

A similar case to this was reported in the *British Medical Journal* about a year ago, complicated with iritis in addition, but the symptoms were much milder and the result more favourable.

(Read before the South Australian Branch of the British Medical Association.)

RHEUMATIC FEVER.

By E. E. Moule, M.B., B.S., Mannum, S.A.

The following cases are my text for a short discourse on the infection and treatment of rheumatic fever :—

Case I.—On October 13th, 1903, I was called to see a child (B.B), 20 miles away. He was 6 years old, and was suffering from a severe attack of rheumatic fever, with considerable cardiac pain, and a systolic apical murmur. The child could not lie down because of the cardiac pain. Calomel was given, followed by sod. salicyl. in large frequent doses. I saw him two days later, when his parents assured me that within four hours of taking the first dose of sod. salicyl. his pain had gone, and he could lie down. I found the temperature subnormal; no return of pain; no cardiac embarrassment; and the child was lively, and had a good appetite. There was no relapse, and the cardiac murmur soon disappeared.

Case II.—On October 18th (five days after seeing case I. for the first time) the child's brother, C.B., a young man of 16, was brought to me. He also had rheumatic fever. His temperature was 103°, and his pains were so severe that he could hardly bear the weight of a sheet. He was given 20 grs. of sod. salicyl. every two hours till pains eased. Next day he was easier, but the pains had not all gone, and the temperature was 101°. His heart was not beating so forcibly or rapidly as on the previous day. Sod. salicyl. in 15 gr. doses with spt. ammon. arom. was then given every two hours. Still the pains and pyrexia persisted, the patient became restless, and could not see so well. There was humming in the ears, and the pulse slower and weaker than on the previous day. On the evening of October 21st he was given 30 grs. of sod. salicyl. with tr. nux vom. and tr. capsici every hour for several doses. He became delirious, fancied he could see snakes and spiders on his bed, and talked almost incessantly through the night. Next morning the pains had completely gone, the temperature was subnormal, and the bedclothes very wet with perspiration; the pulse was slow and irregular, but the heart sounds clear and pure. The drug was stopped for several hours, and then given in 15 gr. doses three times a day. The delirium soon ceased, the heart's action became regular, and the auditory and visual troubles soon went away, and he ate and slept well. There was no return of the disease.

Case III.—On October 24th these boys' father (M.B.) was brought to me. He also had rheumatic fever. His temperature was 103°, and the most painful joint was the knee, which was kept flexed with a support under it. He had been trying numerous acupunctures over the affected joints and over the heart, where he had slight pain, but got no relief. He used a Lebenswecker, which is a German invention, and has to be used with a patent oil. A good description of this instrument of torture is given in the *B.M.J.*, September 19th, 1903, page 674. I gave him 22½ gr. doses of sodium salicyl. (combined with amm. carb. and tr. nux vom.) every hour till pains ceased. After taking six doses he sweated profusely, the temperature became subnormal, the pains completely disappeared, and his pulse became slow and irregular, missing one beat in nine. He felt quite comfortable, and slept well. No medicine was given for several hours. Next morning the heart's action was normal, and there was no return of pain or pyrexia. Half doses of the mixture were then given three times a day. After four days in bed he got up and went home, 20 miles away, against my advice. He soon had a smart relapse, and used the Lebenswecker once more, and also kerosene blisters, without any relief. Finally, he came to me again, and large doses of sod. salicyl. soon took away pains, pyrexia, and joint swelling. On this occasion he took 120 grains in five hours. He was kept in bed a week afterwards and had no further relapse.

These three patients lived in the same house. They all had a "cold in the head" before getting the joint trouble, but a definite history of tonsillitis was only got in case I.

CASE IV.—On October 27th I was called to see a boy (F.S.), 11 years old. He had rheumatic fever. It was his second attack. A preliminary tonsillitis had not been noticed, but I found his pharynx very much congested. The joint pains were very severe. Sod. salicyl. was given till "snakes" appeared. Next day, October 28th, he was sitting up in bed playing with some toys. There was no relapse.

CASE V.—On October 22nd, M.M., a girl of 6 years, was found to have follicular tonsillitis. Sod. salicyl. was given, also a gargle and throat paint.

On October 25th the throat was clear. I stopped visiting the child, and gave her an iron tonic.

October 27th, two days later, I was called to her again. There was some malaise; the temperature was 100, and a few fresh white patches on the tonsils. Gargle again used and 4 grs. of sod. salicyl. given every three hours.

October 28.—Temperature 101°. Slight pain in right ankle.

October 29.—Temperature 103°. More out of sorts. Few erythematous spots on wrists. Pain in left shoulder joint. Rheumatic fever diagnosed, and sod. salicyl. given in 4 gr. doses every hour.

October 30.—Pains completely gone; temperature subnormal. Patient sitting up in bed playing with her dolls. Says she feels quite well. Sod. salicyl. given in 5 gr. doses every three hours. Convalescence was rapid.

Infection.—In four out of these five cases there was a definite history of an antecedent naso-pharyngeal trouble, and in the other case the fauces were very red. The history of these cases supports de Havilland Hall's theory, *B.M.J.*, October 31, 1903, page 1138:

"I think, therefore, that clinically we may regard acute multiple articular rheumatism as an infectious disease, which runs through the course of an attenuated pyæmia, and that in a large number of cases the infection enters the system through Waldeyer's pharyngeal ring, especially the faucial tonsils."

The fact that three in one household got the disease one after the other lends weight to the infective theory. The presence of antecedent throat trouble supports the theory of pharyngeal entry.

These cases all occurred in the same month, and in three households who had no communication with each other, so we may say the disease was epidemic.

In each household other members of the family got "colds in their head" and slight muscular and joint pains, but got well without any medical attention and without lying in bed even for one day.

In these cases the bodily resistance was strong enough to keep the invader outside the pharyngeal barrier. It may be possible for one of these cases to infect another person who could not resist the poison so well, and for rheumatic fever to result.

Treatment.—First give an aperient, calomel for preference. Next, and very soon after, give sod. salicyl. I believe that it is a specific in rheumatic fever if given freely enough. It should be given in doses large enough to drive away the pains and pyrexia in a few hours, and then given in small doses to maintain the action of the drug.

Many men are so afraid of the toxic effects of sod. salicyl. that their maximum dose is 10 grains. I have heard them say they were very much disappointed with sod. salicyl., so I asked what was their dosage. When they answered from 5 to 10 grains, I was not surprised that they got such poor results. The B.P. dose is from 10 to 30 grains, and the nearer we get to the maximum the better for our patients.

Sod. salicyl. does not merely relieve pain and lower the temperature; it is an antidote to the rheumatic poison. Not only is pain relieved and the temperature reduced to normal, but the joint swellings disappear, the patient feels well, eats well and sleeps well, and rapidly recovers his strength.

Even such a master as Osler thinks the drug merely relieves the pain. He believes the disease is self-limited, and that the use of salicyl. compounds makes relapses more common. He says sod. salicyl. may be given in 15-grain doses for eight or ten doses. It seems like blasphemy to say that Osler is wrong, but I do most emphatically say so. You will have noticed that in case II, although 20 grains of sod. salicyl. every two hours brought some relief, it was not till 30 grains were given every hour that the disease was conquered; also in case V an increase from grs. 4 every three hours to grs. 4 every hour soon conquered the disease.

There is no need to be alarmed when toxic symptoms appear. There may be a slow, irregular pulse, a craving for plenty of fresh air, and nocturnal delirium resembling *delirium tremens*, besides the usual auditory disturbances, but there is no need for fear. Of course there is need for confident care, but that is not fear. The medical man must have confidence in himself to do his patient justice. When the toxic effects are marked the drug should be stopped for a few hours. The toxic effects soon pass off and the administration of the drug can be resumed before the disease has had time to return. The medical man should see his patient several times a day when giving large doses, and it is often desirable to give some ammonia and tr. nux vom. with the salicylate when so doing.

I believe that we should give the disease a knock-down blow by large doses; afterwards it is easy to keep it down by small ones. We should remember that the rheumatic poison is more dangerous than sod. salicyl., and that underdosing will do more harm than overdosing. The Adelaide Hospital Pharmacopœia contains a Haust. sod. salicyl, which has 15 grs. in each dose. When I was house physician it was the practice to give this every three or four hours in cases of rheumatic fever, sometimes without much benefit. In one case there was not much benefit till by some mistake the patient got double doses, which promptly cured him. Since that time I have always increased the dose if it did not soon give complete relief. I usually give 30 grs. at once, then 20 grs. every two hours till pains cease, then 10 grs. three times a day. Nausea is often complained of, and the drug has to be stopped for a while. If the drug is given rapidly in large doses, nausea will not be troublesome till the disease is subdued, and then the drug may be stopped for a while without the disease coming back. The nausea soon passes off and the drug can again be given.

Lees, in Harveian Lectures, B.M.J., November 21, 1903, mentions two cases where 2 drms. of sod. salicyl. were taken three times a day without any unpleasant symptoms appearing. These were cases of chronic rheumatism. In rheumatic fever he gives sod. salicyl., with twice its weight of sod. bicarb., in heavy doses. He believes the addition of the sod. bicarb. prevents the onset of "air hunger," which he thinks the most alarming sign of the toxic effects of sod. salicyl. I have noticed the occurrence of "air hunger" in several cases, and it is always accompanied by great slowing and irregularity of the pulse; but it never occurs till the disease is subdued, and if the drug is withheld for a few hours it soon passes off. I have never used large doses of sod. bicarb. with sod. salicyl., and therefore cannot verify or disprove Lee's assertion.

I have purposely kept from any mention of the treatment of complications. If sod. salicyl. be given early in large frequent doses there will be few complications. Local treatment is unnecessary in uncomplicated cases. There is no need to wrap the joints in flannel, or compresses wrung out of a bicarbonate of soda solution. Neither is there any need to give opium to relieve pain or sleeplessness.

Diet.—Patients are encouraged to drink as much water, very weak tea without milk, or lemon water as they can. The food is small in quantity and easily digested. Soups and bread are better than milk, which does not agree with most people, especially when given undiluted. As soon as the disease is subdued, plain ordinary diet is given.

Bed.—It is seldom necessary to keep a patient in bed more than a week. Usually the patient is walking about within ten days of the beginning of the treatment.

(Read before the South Australian Branch of the British Medical Association.)

RENAL RADIOGRAPHY: AN ACCOUNT OF 50 CORRECT POSITIVE RESULTS.

By **L. Herschel Harris, M.B., Ch.M., Hon. Skiagrapher Sydney Hospital and Sick Children's Hospital, Hon. Assistant Surgeon Sydney Hospital, Member of the Rontgen Society of England.**

Having completed a series of fifty correct positive results in renal radiography, I thought perhaps it would be of some interest to record the cases, and at the same time to include my failures. Altogether 328 cases suspected of having either renal or ureteric calculi have been examined in private and hospitals, the patients consisting of men, women and children. Most of these cases had symptoms strongly indicative of renal trouble, and each case had been previously examined by a medical man, and was sent on for a radiographic examination. From these 328 cases 50 correct positive results (proved by subsequent operations) were obtained, and seven mistakes were made.

The following is a summary of the cases:—

Sex.	Calculus in R. Kidney.	Calculus in L. Kidney.	Calculus in R. Ureter.	Calculus in L. Ureter.	Total.
F.	8	7	—	—	15
M.	25	8	1	1	35

Of this number only two cases occurred in children, one being seven and the other nine years of age. The ages of the adults varied from 17 to 58. In one case calculi were found in each kidney at the one time. In two other cases calculi were detected on the opposite side some months after calculi had been removed from the one side. In two cases calculi were found in kidneys which had been previously operated upon for the removal of calculi some months previously, on the first occasion a stone being found in one case, whilst no stone was found in the other case. In two cases calculi were found in the ureter, both in males, one on right side and one on left; the calculus in one case being situated in the ureter just near the pelvic brim, whilst in the other case it was situated just about one inch from the entrance to the bladder. A skiagram of the ureteric calculus in the latter position was published in the *A.M.G.* of 20/11/00, and this, I believe, was the first skiagram ever published showing a stone in the ureter. In only one case were calculi found in the substance of the kidney, and this case had been operated upon two years previously, when a calculus was removed from the pelvis, but the pains persisted till the second operation, since which (now over three years) the patient has been quite well. In three cases the symptoms were almost entirely confined to the one side, and in each case a calculus was detected in the opposite kidney.

As to the signs and symptoms in the cases which have come under my observation, they have by no means been uniform. The majority have complained of pain on the side on which the calculus was present, pain varying from that of an excruciating nature to a dull ache, or perhaps just a slight uneasiness in the situation of the kidney. Most of them had experienced attacks of renal colic, with nausea and vomiting. About half of them described the pain as travelling downwards, in the direction of the ureter. Several of the males described "retraction of the testicle." Of course they had all been questioned before coming to me, and so several of their answers had no doubt been suggested to them.

As to the urine in these cases, it was not possible to ascertain the composition in every case, but in most of the hospital cases it was centrifugalised and carefully examined, and in several private cases a result of an examination made by the medical practitioner was written in a note accompanying the patient. The most constant feature was the presence of albumen, and secondly, pus. In several cases the urine was absolutely normal. The presence of casts, crystals and blood cells varied, crystals being the most frequently present of these latter constituents.

I classify my results under the headings of positive and negative. The positive results are of more value than the negative ones, as I pointed out in the paper read at the Hobart Congress last year. I may remind you of the fact that the oxalates are the best defined in a skiagram; next come the phosphates, whilst the uric acid calculi are the least defined, and in stout people may not show at all. This fact is now recognised all the world over. A thin person is very easy to obtain a good and reliable skiagram of, whilst a stout one is "a thing to be avoided," if possible. Sometimes a doubtful shadow will appear in a skiagram, and then I take one, or perhaps, even three or four more to endeavour to obtain a similar shadow. If I obtain, on two or more occasions, a shadow which corresponds in every detail as to size, position, shape, etc., I then make a positive diagnosis. Sometimes these cases are on the borderline, and it is most difficult to express an opinion. I have fallen in over several of these, and at the same time I cannot explain how the shadow was produced. These are the difficult cases, especially too if the patient be stout, for the exposure, according to my plan, is fairly long, with a soft tube, and so one must be careful in making several exposures not to produce a dermatitis.

Of the negative results, I feel pretty confident of them in thin patients, but in stout ones I can only say that "probably no calculus is present." My stoutest case was that of a patient who weighed 14 stones, when a calculus was detected and subsequently removed by operation. It was of the oxalate variety. My next best case was in a patient weighing 13 stones, when I detected a small calculus on one side, whilst all his symptoms were on the opposite side. Subsequent operations on both sides proved the skiagram to be correct, and this calculus was also of the oxalate variety.

As for my mistakes, I have made seven, and most have been in stout patients. My first one was in a very stout patient, whom I told that the result was not reliable. In this case a huge uric acid calculus was found, resembling a large lump of ginger. I can assure you that making 20 correct diagnoses will not compensate for one mistake, because patients say such "nasty things," and medical men, too, indulge in "pulling the leg," so to speak. I have heard it related that when a certain stout patient had come to after an operation, when a huge calculus was removed which I had failed to find in my skiagram, on being informed of the result he turned to the nurse in charge and said, "Has Dr. Harris dared to face the situation?" I am always mindful of this sentence, and in doubtful cases it is the first thing I think of.

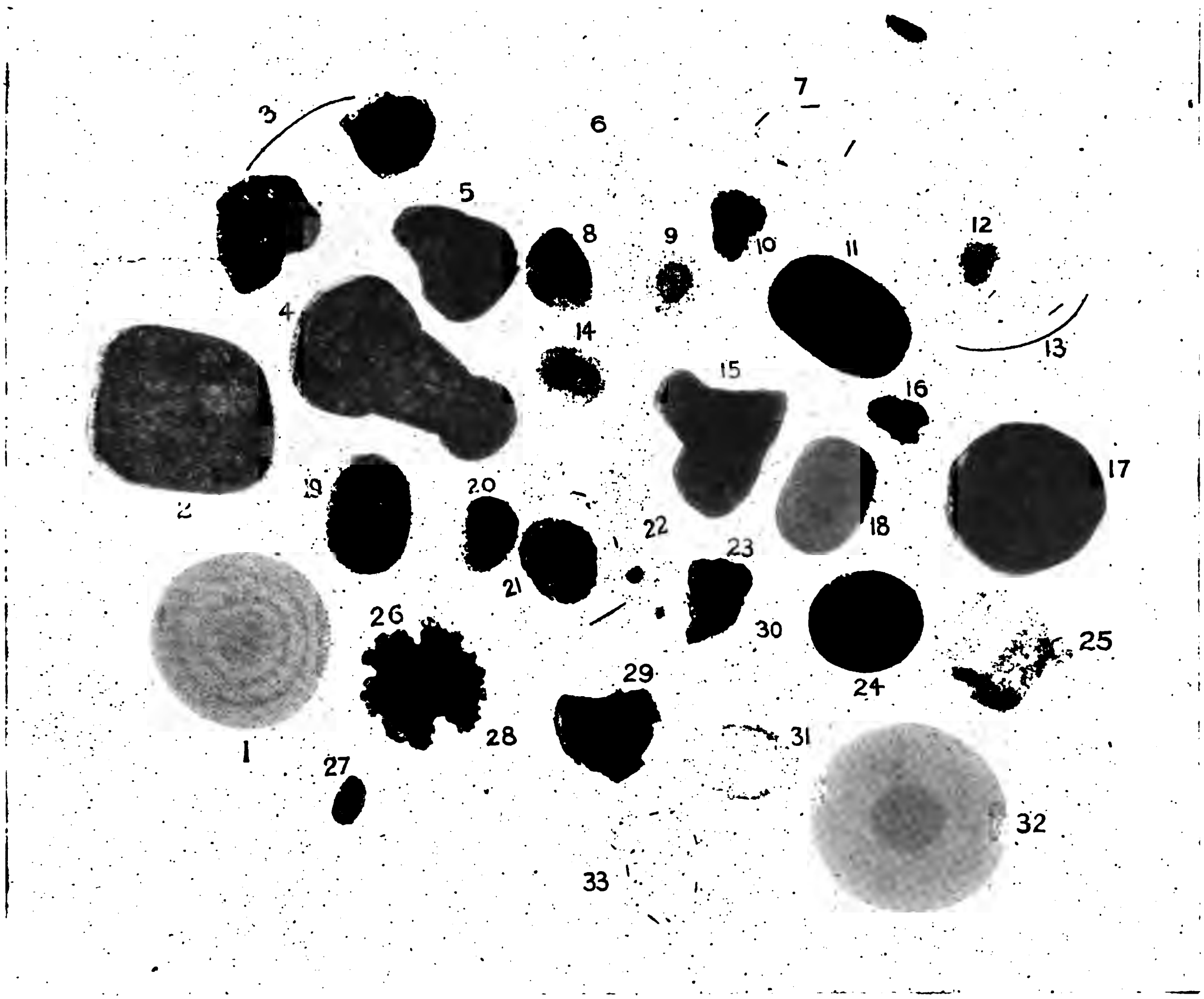
Two of my mistakes were made in thin patients. In each case there existed a stricture of the ureter, but I have no idea why in each case I obtained a shadow in my skiagrams, making me give a positive diagnosis. In one pus case I overlooked a small calculus. Two

SKIAGRAM OF CALCULI.

ILLUSTRATING PAPER BY DR. L. HERSCHEL HARRIS ON "RENAL RADIOGRAPHY."

(From a collection kindly lent by Dr. R. Steer Bowker.)

(Reduced to ⅓).



1 Bladder—Phosphates
2 Bladder—Phosphates
3 Kidney—Phosphates
4 Bladder—Oxalate
5 Kidney—Phosphates
6 Urethral—Phosphates
7 Gallstones
8 Bladder—Phosphates
9 Bladder—Phosphates
10 Kidney—Oxalate
11 Bladder—Phosphates
12 Bladder—Phosphates
13 Gallstones
14 Bladder—Phosphates
15 Kidney—Phosphates
16 Kidney—Oxalate
17 Bladder—Oxalate
18 Bladder—Phosphates
19 Bladder—Phosphates
20 Bladder—Phosphates
21 Bladder—Oxalate
22 Gallstones
23 Ureter—Oxalate
24 Bladder—Phosphates
25 Kidney—Phosphates
26 Kidney—Oxalate
27 Ureter—Phosphates
28 Kidney—Uric Acid
29 Kidney—Oxalate
30 Kidney—Uric Acid
31 Bladder—Uric Acid
32 Bladder—Phosphates
33 Gallstones

cases were in stout patients. One had a large uric acid calculus which I failed to detect, and the other gave a fairly definite positive result on two occasions, but operation failed to find anything; and, lastly, in a thin patient I failed to detect a calculus which was removed by subsequent operation. One fact consoles me, and that is that every case has derived benefit from the operation, whether a stone were present or not, and this is a very important point. Many cases would derive benefit by an exploratory operation, but such is often postponed or even advised against because of a negative diagnosis.

I think everyone will admit that radiography is of very great service to renal surgery, but I do not think that this should stand in the way of exploration if deemed necessary. If a calculus be in the ureter, then a skiagram is of the utmost service.

Lester Leonard, in a contribution to the "Annals of Surgery" of April, 1902, gives an account of radiographic examinations in 227 cases suspected of having renal or ureteral calculi and the detection of 40 cases of ureteral and 25 cases of renal calculi. From these cases he draws the conclusion that ureteral calculus is much more common than has been supposed, or that about 50 per cent. of all cases of calculi are ureteral. My results show two cases in 50, or 4 per cent., and I think that most surgeons will agree with me that 50 per cent. is much too high, and that 4 per cent. is much nearer the mark. Then, again, in the case of small calculi with ill-defined symptoms, a skiagram may be of use.

Henry Morris says of small calculi: "If such silent lurking calculi could be discovered and removed many deaths from calculus anuria, much illness and suffering from perinephric abscesses and renal fistulæ, and many kidneys undergoing atrophy and degeneration might be saved by well-timed operations."

Statistics derived from the operations of the most competent renal surgeons show that the mortality of nephrolithotomy is but 2 or 3 per cent. if the operation is undertaken when the calculus is small and before infection has taken place. When the characteristic symptoms are present and infection has taken place the mortality rapidly rises to 25 per cent., according to Leonard.

In Guy's Hospital reports of 1902, Dr. Shenton states that 200 cases were examined for renal calculi within the last two years, with the following results:—Cases in which rays and surgeon found calculi, 28; cases in which surgeon found calculi, but the rays did not, 8; cases stated not to have calculi by the rays and operated upon with negative results, 11; cases in which the rays found calculi and the surgeon did not, 2. In 39 cases the rays were correct; in 10 they were wrong. The errors occurred in stout people and in those who presented abnormal opacity to the rays, or in cases in which the stones were composed of uric acid or of urates, or in which the stones were very small.

Hurry Fenwick, as reported in the Medical Annual of 1903, says with regard to radiography of the kidney: "Neither practitioner nor operating surgeon can afford nowadays to neglect or depreciate radiography of the urinary tract." In his experience it is impossible to detect by means of the X-rays a very small spiculated renal or ureteric stone the size of a wheat grain, but all oxalates from the size of a coffee bean, all fair-sized phosphates and large urates can be discovered by the shadow which they cast upon the highly-sensitised plates now universally adopted.

One of his "golden rules" is:—Every child with repeated attacks of severe stomach ache should be X-rayed, for many of those recurrent attacks of apparently intestinal colic in children are merely attacks of nephritic colic. Another rule Fenwick follows is: "Every child who has passed blood in the urine painlessly should have both kidney areas skiagraphed, being convinced that painless hæmaturia in children is often the result of an early stage of oxalate of lime stone in the kidney, and this is demonstrable by means of the X rays."

Technique of Renal Radiography.—The patient is ordered a preliminary purge. The skiagram is taken with the patient lying on his back with the plate underneath. I always use an accelerating screen. The plates used are Imperial Specials, Lumière's, or Dr. Schleussner's. The most convenient size is 10 x 12 inches. The developer employed contains glycin, and acting on the advice of Mr. Fryatt, assistant to Dr. Fred Bird, of Melbourne, I now use theonine in the fixing bath. Over-developing should be avoided lest a faint shadow be thereby obscured. The negative should always be examined when dry before expressing a definite opinion, and examined in various lights with different backgrounds. A special examination box has been constructed at the Sydney Hospital for this purpose similar to one used by Dr. Clendinnen and Dr. Bird, of Melbourne. It consists of a wooden box fixed on the wall, with a front of opal glass, and containing a glow lamp which can be moved about in any direction. In a dark room this device is admirable. Unless the "landmarks" are well seen, no definite opinion should be expressed till a better result is obtained. The negative contains all the reliable information; the print is a pretty thing to show the patient. The tube used should always be as soft as is compatible with the thickness of the patient.

Leonard, of Philadelphia, and myself were the first to point this out; and Dr. Low, secretary of the Röntgen Society, tells me that most operators now follow this plan in England. The tube is usually placed at a distance of 18 inches from the plate. If the patient be thin, the Queen auto-regulator answers best; other good tubes are made by Cox, Cossar, Dean, and several good bi-anodal tubes are also procurable locally.

A FURTHER SERIES OF CASES OF PERINEAL PROSTATECTOMY.

By **H. L. Maitland, M.B., Ch.M.** (Syd.), Hon. Surgeon, Sydney Hospital.

In a paper entitled "Perineal Prostatectomy," with a series of five cases, which I read before the Branch, and which appeared in the *Australasian Medical Gazette* of July, 1903, I expressed the opinion that the perineal was the route of choice in the operation of enucleation; that it was safer and more in accordance with rational surgical technique than the suprapubic route. After an experience of both routes I gave as reasons for my preference of the perineal route:—

1st. That it was the most direct route anatomically.
2nd. That drainage was more satisfactory.
3rd. That much injury to the bladder is avoided.
4th. That there is less danger of sepsis.
5th. That there is less shock.
6th. That the convalescence is shortened.
7th. That the prostatic urethra (the roof) can be better preserved.
8th. That there is less hæmorrhage, and it is better under control.

The operation that I described in my previous paper is the one that has been followed in this second series of cases. In three of the five, the result left nothing to be desired. In case No. VI. the operation was followed by a perineal fistula, but that is a great improvement on his condition before operation, because he is free from pain and is able to do his work, which he could not do before. Case X. died, and when his age (79) is considered, and the condition he was in (retention for five weeks, a silver instrument being passed once a day by a midwife), the result is not to be wondered at. It was necessary that the man should have bladder drainage, and I feel sure that he would have died if only a suprapubic cystotomy had been done.

No.	Age.	Duration of Symptoms.	Previous History.	Result.
VI.	68	10 yrs.	Nocturnal frequency 11 or 12 times, accompanied by pains; about 10 ounces of purulent alkaline urine.	The prostate was a tough adenoma and was removed in several pieces; protracted convalescence. A perineal fistula remained, but is free from pain, and can work; fistula is closing.
VII.	68	5 yrs.	Has had several attacks of retention; suprapubic drainage 6 months previously by another surgeon; frequency; pain.	The prostate was a soft adenomatous one, and was removed in two pieces; was about size of small orange; had an attack of orchitis 3 weeks after operation; has had complete relief since operation; no frequency; no pains.
VIII.	70	10 yrs.	Retention on three occasions; was tapped suprapubically 4 months ago by another surgeon; frequency and pain.	The prostate about size of walnut; easily shelled out in two halves; urinated naturally on the 4th day; was up and about on the 14th; has not had any trouble since the operation; no frequency; no pain.
IX.	68	12 yrs.	Nocturnal frequency, accompanied by pain; purulent alkaline urine; accustomed to self catheterisation.	The prostate was a large and soft adenomatous one, and was removed in several pieces; some incontinency for one month after the operation; bladder daily irrigated; urine became normal in about 6 weeks after operation; has only some slight frequency at night 2 or 3 times.
X.	79	15 yrs.	Complete retention for 5 weeks; very offensive alkaline urine: had been for six weeks daily catheterised by a midwife.	The prostate was a very large one, and was easily removed; patient died from uræmia on the seventh day after removal.

CLINICAL AND PATHOLOGICAL NOTES.

CONCURRENT UTERINE AND TUBAL PREGNANCY.

T.E., *æt.* 33, admitted into the Sydney Hospital July 20th, 1903; 2-para. Last child six years ago. Two abortions since then; last one 18 months ago. Complains of severe pain in the right inguinal region, which began suddenly four weeks ago, accompanied with vomiting, and followed in a week by slight uterine hæmorrhage, which has continued on and off since. There have been several exacerbations of the pain since the acute onset. The menses had ceased for two months prior to this hæmorrhage, and she considered herself pregnant. The uterus was made out to be enlarged and crowded over to the left by a mass in the right fornix the size of an orange.

Under ether the uterus was curetted, and found to contain an unruptured ovum of about the fourth or fifth week. The diagnosis was then altered from "ectopic gestation" to "early uterine pregnancy, complicated by small ovarian cyst." As the patient was weakly and had lost a considerable quantity of blood in curetting away the ovum, abdominal section was postponed for a few days. The mass in the right fornix was then found to be the Fallopian tube with greatly thickened walls unruptured, and containing unruptured ovum with laminated blood clot surrounding a fœtus three-quarters of an inch long.

The attack of pain was doubtless due to hæmorrhage into the ovum and consequent distension of the tube, and also to escape of a small quantity of blood from the fimbriated end of the tube into the peritoneal cavity.

The patient made a good recovery.

Concurrent uterine and ectopic gestation is much rarer than ectopic with subsequent uterine gestation. Bland Sutton refers to but five recorded cases of the former.

RALPH WORRALL, M.D.

Sydney.

AN UNUSUAL CAUSE OF LARYNGEAL OBSTRUCTION.

I WAS called to see a Syrian child, 20 months old, on the 9th June. I found him in a condition of advanced dyspnœa from laryngeal obstruction. The fauces were congested, tonsils huge, and though there was no membrane to be seen I sent him to the Diphtheria Hospital, where he was admitted. Under steam the dyspnœa decreased, and tracheotomy was dispensed with. No bacillus of diphtheria could be found, so he was discharged in a week's time, relieved; but still with considerable difficulty in breathing. A few days afterwards I was again called to see him, and found him in much the same condition as on my first visit. He was admitted to Lewisham Hospital under my care, and I opened the trachea the same day. I then removed his very large tonsils and adenoids. He wore a tube for two months, any attempt to dispense with it causing alarming attacks of dyspepsia. Under anæsthetic his larynx was repeatedly examined, but very little information was gained, except that the epiglottis was apparently abnormally curled on itself and overhanging and obscuring the rima. On the last occasion, however, just as I was withdrawing the mirror a deep inspiratory effort was made, and I caught a glimpse of a rounded body slipping into the interval between the epiglottis and larynx. Further observation showed that this was repeated at each inspiration, and on lateralising the mirror the body was seen to be the lip of the uvula. It formed a complete plug, and fully accounted for the inspiratory obstruction. The mirror had on previous occasions lifted the uvula, so that the phenomenon could not occur. I removed the uvula, and within 48 hours the tracheal tube was left out, nor was it ever necessary to reinsert it. The child now breathes quite naturally and without any difficulty.

FRED J. T. SAWKINS, M.B., Ch.M. (Syd.),
Hon. Surgeon Lewisham Hospital.

Sydney.

REVIEWS AND NOTICES OF BOOKS.

A TEXT-BOOK OF MATERIA MEDICA, THERAPEUTICS, AND PHARMACOLOGY. By George P. Butler, Ph.G., M.D., Professor of Materia Medica and Therapeutics in the College of Physicians and Surgeons, Chicago, Medical Department of the University of Illinois, etc. Fourth edition, thoroughly revised. Octavo volume of 896 pages. Philadelphia and London: W. B. Saunders & Co. 1902. Melbourne: James Little. Price, 17s 6d.

In this, the fourth edition of the work, the author has aimed at a remodelling of the opening chapters on Pharmacology and General Therapeutics. He has succeeded very well, providing the reader with an intelligent and comprehensive treatise on the subject. To this he has added his own personal experiences as a practitioner and teacher.

The arrangement is a rational one, embodying a classification of drugs which is based on their therapeutic affinities. The whole book is well abreast of modern research, and is infused with the spirit of a natural interpretation of disease processes, as being reactive and to a certain degree self-preservative. There is nothing in the book that has not already been published elsewhere, but it is nevertheless a most useful compilation of present-day knowledge. It can be recommended to both student and practitioner.

A.W.M.

NERVES IN DISORDER: A PLEA FOR RATIONAL TREATMENT. By A. T. Schofield, M.D., Hon. Physician, Friedenheim Hospital. London: Hodder and Stoughton. Sydney: Angus & Robertson. 1903. Price 3s 6d.

This volume contains the substance of a lecture delivered by the author some 12 years ago at the Sanitary Institute, which has been recast and now published for the first time. We must confess, at first, our dislike to any book which is intended to convey to the general public medical information on strictly medical matters, which cannot be properly understood by the lay mind, which has no knowledge of anatomy or physiology. This book, however, is written with the idea rather of preventing some erroneous notions about "disordered nerves" from being retained in the public mind, and to show how improper it is to treat sufferers from such a diseased mental or nervous condition as if they were criminal malingerers. With such advice we are in entire accord. Firmness in dealing with patients suffering from so-called (but, in our opinion, mis-called) "hysteria" is of course of the first importance, and such firmness can sometimes be only made effectual by the adoption of what appears to be cruel means. The author has endeavoured to impress upon his readers this important fact, and has given a good deal of useful advice on the importance of recognising the influence of the mind over the body in cases of bodily disease. He concludes with an outline of the Weir-Mitchell treatment, and the various methods of treatment usually adopted to secure the full re-establishment of nervous and mental health.

While the book may be useful for educating the public on the lines we have indicated, we hardly think it will be of much service to the practitioner who is in search of points in diagnosis and treatment of nerve disease. Yet it is pleasant reading, and the practitioner will not lose by a perusal of it. G.E.R.

A Treatise on Materia Medica and Therapeutics, including Pharmacy, Dispensing, Pharmacology, and Administration of Drugs. By Rakhaldas Ghosh, L.M.S., Calcutta University, late lecturer on Materia Medica, Calcutta Medical School. Edited by Lt.-Col. C. P. Lukis, M.B., F.R.C.S., I.M.S., Acting Prof. of Therapeutics, Calcutta Medical College. Hilton & Co., Calcutta. 1903. Price, Rs. 4·8, or 7s.

This work presents several points of more than usual interest. It was written by a native of India, whose untimely death prevented his supervising the carrying of his own work through the press, and it has been edited, printed, and published in Calcutta.

The book, which runs into nearly 700 closely printed pages, deals very exhaustively with its subject. The design and the result may fairly be called encyclopædic. While it is erudite and thoroughly modern in the pharmacological and therapeutical sections, pharmacy has not been neglected—has, indeed, been very fully treated; and the volume is replete with wise hints and practical "points" that are likely to be very useful to the practitioner in his everyday duties.

The late author's industry was most praiseworthy. For one thing in particular he deserves our gratitude: he gives frequent and full attention to the construction and writing of the prescription. Now, in these days, this elementary function of the medical attendant is in danger of atrophy through lack of use. Prescribing will shortly be one of the lost arts. The profession is bowing down before strange gods in the shape of travelling agents of 'cute business firms. These, with their specious pharmaceutical ventures, we honour, and obey all their commandments. *They* prescribe, and medical men adopt their formulæ. But our author shows how "elegant prescribing" may be done by ourselves, with proven remedies. His remarks under this heading might well be taken, *omni mane atque hora decubitus*, by every man whose business it is to administer medicinal agents. In the face of the present universal tablet mania (with its natural result that every man has become to a great extent his own doctor) it is a significant fact that *only one tablet* has been thought worthy of adoption by the compilers of the British Pharmacopœia.

In comparison with its many excellencies, the shortcomings of this volume are insignificant; they are chiefly typographical errors. That familiar spirit, the printer's devil, is not without power in Hindostan; he has wrought several sportive wonders with the letterpress; he will have to be restrained when the next edition comes on. It may also be remarked that, judging from parts of the book, the King's English and that of the Emperor of India are at times two different things. And it is quite evident that the study of medical Latin is in the same stage of decadence under the rising as under the setting sun. All these defects can, however, be remedied by more careful editing, and even in their presence the publication is very creditable to the local press and medical school.

We can accordingly recommend Mr. Ghosh's work with confidence. For the student it will prove a reliable text-book, for the practitioners it will be serviceable as a work of reference, and to the pharmacist it will yield much technical and practical guidance. The volume is supplied with a good index. We suggest an index of diseases for the next edition. The price is exceedingly moderate. A.W.M.

The Purin Bodies of Foodstuffs and the Role of Uric Acid in Health and Disease. By I. Walker Hall, M.D. Second edition (revised). Sherrat & Hughes, London and Manchester. Price, 4s 6d net.

The purin group is a name given to the series of closely related substances known to us as uric acid, xanthin, hypoxanthin, adenin, caffein, theobronin, and the rest. The book is the result of an enquiry into the physiological history of these various bodies, with a study of their origin, rôle, and fate. Dr. Walker Hall has produced a small and very readable book, which can be commended to the careful study of medical readers with the assurance that it is well worth the trouble.

Dr. Hall shows that of the purin bodies excreted in the urine, a measurable portion, more or less constant for the individual, is produced within the tissues, and these he calls the "endogenous" purins. Another portion is derived from purins contained in the various articles of food consumed, and these are distinguished as the "endogenous." The purins in the food, again, are distinguishable as "free" and "bound." The "free" purins are the soluble ones, such as are obtained in beef tea and similar extracts, and the "bound" are the insoluble ones, retained in the cell nucleus as nucleins. Lists are given showing the percentage amount of purin bodies which different articles of food are found to contain when analysed. The lists show that certain food articles contain none, others a moderate amount, and others much, ten or a dozen times as much as in the second group. It is shown how this affects the output of uric acid and other purins in the urine, and how the urinary purins of exogenous and endogenous origin, respectively, may be separately estimated. Dr. Walker Hall has invented an apparatus termed a "purinometer," with which these estimations can be readily and quickly made by the ordinary unskilled clinical practitioner. The reviewer has personally tried the apparatus, and he can endorse its simplicity, convenience, and adaptedness to clinical purposes. He has not personally tested its accuracy, but Dr. Walker Hall publishes a table of comparative tests which show a degree of accuracy abundantly sufficient for clinical purposes.

Weighty evidence is brought forward to show that uric acid is not a terminal metabolic product, but a attempt to make use of the doctors to enable it to spread its wings in New South Wales. On this point the profession in New South Wales is united, and we hope will remain united in the interest of itself and of suffering humanity.

THE DECLINING BIRTH-RATE.

The Royal Commission appointed by the New South Wales Government in August last year to consider and report upon the serious decline in the birth-rate in this State in recent years has now completed its labours and presented its report to his Excellency the Governor.

We consider the report a masterpiece of exhaustive examination and investigation of a subject which it is admitted on all hands bristles with difficulties. It is a lengthy document, and is printed separately from the evidence, minutes, and the diagrams, which are to be published in another volume. Briefly, the Commissioners have found as a result of their investigations that the decline of the birth-rate is due in very large measure, not to any physical degeneration or lack of fertility in the present generation of Australian women, but to deliberate checking of the procreation of children by various artificial methods, thus nullifying one of the main objects of marriage, and degrading the married state from one of honour to that of "monogynous prostitution."

The Commissioners are also most emphatic in their conclusions that the adoption of these practices for the limitation of families tends to the physical and moral degeneration of the race. They point out that the increase in insanity is going *pari passu* with the decline in the birth-rate; and there can be no doubt that a very large amount of ovarian and uterine disease is to be attributed to the use of various instruments which are used to prevent conception, but which favour sepsis, and thus predispose to chronic disease of the uterus and its annexa.

We must all heartily agree with the various suggestions made by the Commissioners with a view to checking the decline in the birth-rate and the prevention of the present high rate of mortality among infants, so that the normal rate of increase of population may be restored and maintained. But still it is doubtful how far these suggestive measures would succeed in their object even if carried out to the letter. The prevention of conception has gained too firm a hold on the female population to be rudely and suddenly displaced, and some means or other will be found to attain this object, even if the use of all the preventives in existence prohibited by law; and if pregnancy ensue, and no one can be found to perform the operation necessary to procure a miscarriage, the pregnant woman will do it herself, albeit with great risk to her own life.

The true remedy for this state of matters, in our opinion, is one which can only be attained, if at all, with great difficulty. It must be instilled into the minds of young married women that barrenness is a disgrace and a sign of weakness. If a social stigma were attached to a woman who was known or believed to be deliberately attempting to defeat the ends of married life, and it became the fashion to have large families, then we should hear no more about a declining birth-rate. This object might possibly be attained if some patriotically-minded ladies took the matter up, and by the formation of mothers' leagues or some similar institutions endeavoured to educate the young womanhood of the community upon the moral and physical evil which results from the use of means to prevent conception. The glory of motherhood must be emphasised, and a woman who enters the married state with the deliberate intention of having no children, who seeks the gratification of the sexual passion without the responsibility of motherhood, should be regarded as no better than a mistress or a prostitute.

Other matters in this report call for discussion on another occasion.

THE MONTH.

The Sydney City Coronership.

The Government of New South Wales has appointed Mr. A. N. Barnett, P.M., to the position of Coroner for the metropolitan district of Sydney in succession to Mr. J. C. Woore, who has retired on his pension. In making this appointment we consider that the Government have shown not only gross incompetence in failing to recognise the importance of this office, and the qualifications necessary in the occupant of it, but have also broken faith with Dr. R. H. Todd, who accepted office as Deputy City Coroner five years ago on the distinct understanding that he should succeed to the City Coronership whenever that became vacant, and who, on the Attorney-General's own showing, has discharged the duties of the office in a thoroughly efficient manner. Dr. Todd, who is both a doctor of medicine and a barrister, stands alone in New South Wales by virtue of these qualifications as the most eminently suitable person to have been elected to the office of City Coroner. It is recognised in all civilised countries that a coroner should be either a medical man or a trained lawyer, or preferably a person who holds both qualifications; and as there was a candidate who possessed the latter qualifications, and no one else in the Public Service did so, that candidate, in the person of Dr. Todd, should have been appointed to the office. The medical profession has a right and a duty to protest against this gross breach of faith and the slight which has been cast upon one of its members in spite of the assertion of the Attorney-General that no slight was intended.

Health Administration in Sydney.

Hitherto the N.S.W. State Premier has been the Minister responsible to Parliament for the administration of the following Acts of Parliament (the provisions of these Acts being enforced by the Board of Health), viz.:—Public Health, Dairies Supervision, Noxious Trades, Cattle Slaughtering and Diseased Animals and Meat, Nuisances Prevention, Sydney Abattoir and Nuisance Prevention, and Quarantine Acts. It has now been notified in the Government *Gazette* that the administrative control of the Acts has been transferred to the Chief Secretary. This will prevent an unnecessary and sometimes dangerous delay, and the Board of Health will in future send its recommendations direct to the Premier for approval.

Sanatorium Treatment of Pulmonary Tuberculosis in New Zealand.

The Nordrach Cottage Sanatorium, the oldest of its kind in New Zealand, was established in July, 1899, for the open-air cure of pulmonary consumption and other tubercular diseases on scientific lines, modelled on the principles followed at Nordrach, in Germany. During this period of four years 120 patients have undergone the treatment. It is situated at a height of 1290 feet on the northern slope of Flagstaff, about 1½ hours drive from Dunedin railway station, in a bracing atmosphere, open to the sun, and sheltered from the prevailing winds—from the N.E by the hillside, and from the S.W. by a plantation of pines. Extending for many miles is the beautiful panorama of the Silver Peak and other ranges. The grounds are extensive, and rise to a height of 2000 feet above sea level, which allows of graduated hill-climbing. The flat area before the house is suitable for walking and for croquet. The periods of rest, when not exercising, are spent on lounges under the trees, or in the various shelters. There is accommodation for ten patients. Each has a separate bedroom, and most of these rooms are arranged to open on a glass verandah, which connects by a covered way with the dining-room and nurses' quarters. The doors and windows of every room open directly to the outside air, and, except in very stormy weather, when either the one or the other may require to be closed, they remain open day and night. Screens of wire gauze are used as a protection against moths at night. The floors of the rooms are polished, and the walls specially constructed to avoid dust and facilitate disinfection. The same sanitary principle has been kept in view with regard to the furnishing. An abundant supply of pure water is laid on under pressure, and the bathroom is fitted with hot and cold showers. The results of the treatment at this institution for the last quarter are stated by Dr. Stephenson to be as follows:—The number of patients treated was 13. The average weight gained by each patient in the quarter was 9¾ lb. The greatest gain in one week was 6 lb. The number of patients undergoing treatment at the termination of the quarter was ten. The progress made was found in most cases to be proportioned to the weight gained.

Infantile Mortality in France.

We are indebted to the Melbourne *Age* for the following interesting abstract on the question of infantile mortality in France:—"A Senator well known by his social work, M.

Strauss, has laid before the French Senate an important bill on infantile mortality; 134,000 infants die every year in France, and it has been proclaimed by competent observers that out of 1000 deaths 766 might be prevented. In all the towns and villages where friendly societies for mothers have been organised and pensions granted during a few weeks before and after births to mothers, infantile mortality has been reduced. In the Parisian friendly society for shop girls the number of deaths has fallen from 10 to 6 per cent. during the first year. Some of these associations have been lately created in the departments of Isere and Seine-et-Marne. In the first one, infantile mortality has been reduced by 15 per cent.; in the second, the number of births has increased (24 per cent.) and the number of deaths diminished (50 per cent.). M. Strauss, convinced by his figures that the high rate of infantile mortality might be reduced by social progress, moved that three kinds of measures should be taken by the State and local authorities. In the first place, as soon as in a commune, during three years, the rate of infantile mortality shall have exceeded the average rate of France, the prefect will be obliged to inquire into the reasons of this excess, and to move, before the municipal and general councils, the adoption of his report. A summary of the inquiry and its results will be sent to the French Academy of Medicine and to the National Committee for Public Hygiene. Secondly, inspection of low houses will be reorganised. In a last chapter, the most important of all, the bill decides that no working woman will be admitted in any workshop during the two weeks which precede and the four which follow her delivery. If she is destitute, medical help and a small pension will be granted by the local authorities. Any woman who knocks at the door of one of the hospitals created by the bill, and who asks for secrecy, will be admitted in a special section; no inquiry will be made by the officials, and the State will adopt her child. Without a division the Senate agreed to a second reading of this bill."

Tuberculosis v. Typhoid Fever in West Australia.

It appears that West Australia is behindhand in the matter of provision of hospital accommodation for patients suffering from pulmonary tuberculosis, and patients suffering from this disease are accordingly housed in the Perth Public Hospital. Recently this hospital committee decided to eject all consumptive patients, in consequence of there being insufficient accommodation in the hospital for typhoid fever cases. The hospital, however, is a Government institution, and the decision of the committee has been overruled by the Acting-Premier, Mr. Kingsmill, who has decided that for the present the consumptives must remain in the hospital. This decision, though perhaps founded upon what appears to the Acting-Premier to be good reasons, is extremely unsatisfactory in view of the urgent necessity for hospital treatment of most cases of typhoid fever, and that most cases of pulmonary tuberculosis are far better outside of public hospitals, unless they are suffering from some acute complications. We hope that the question of some suitable country sanatorium for the treatment of pulmonary tuberculosis cases will receive the immediate attention of the Government of West Australia.

Secret Commissions.

The practice of medical men receiving secret commissions for their recommending patients to special chemists, or instrument-makers, or even undertakers, has been, unfortunately, not unknown in this country as well as in Great Britain; but the general consensus of opinion amongst our respectable practitioners has been strongly opposed to any such practices. That the attempt to secure the patronage of the members of the profession by offering them money commissions is still in vogue is manifest from a circular we received a few days ago to the following effect:—"Dear Sir,—We have opened electric oil baths here for the cure of rheumatism, and shall be pleased to remit to you 21s for each patient we treat through your recommendation. The remedy is genuine and without fail.—Yours faithfully, ——." For unblushing effrontery and quackery this would be hard to beat.

The Sydney Fish Supply.

In the course of his report to the N.S.W. Fisheries Board upon the fisheries of the coast, in the vicinity of Twofold Bay, Mr. H. C. Dannevig stated that "people in Sydney who asked for schnapper in some restaurants received jewfish—a poor and inexpensive substitute. There was no effective method of fish distribution beyond a few miles of the markets. Excellent food fish were wasted, or not caught, and the retail price of fish in shops was high, and prohibitive for the middle classes. Rather than sell fish at popular prices, large quantities were cold stored until the quality was reduced, or the fish (uncleaned) became unfit for consumption. The question of distribution was of the first importance. What was required was well-directed and organised private enterprise, with perseverance and a sensible economic arrangement. Fish that came to Sydney to the market were often dead for three to six days before they reached consumers." Fish is now an important article of diet for invalids, and as an abundant supply of good fresh fish is most desired in this semi-tropical climate, we are pleased to notice that Mr. Dannevig has been instructed by the Fisheries Board to draw up a full report upon the supply and distribution of fresh fish.

Restriction of Inter-State Trade.

In view of the re-appearance of plague in Queensland, the Sydney Board of Health advised the Chief Secretary's Department to impose certain restrictions upon vessels carrying fodder and grain to this State. These regulations were considered necessary by the Board of Health, as they had a bitter experience with the first and second outbreaks of plague, and it was necessary to be very careful in doing all that was possible to prevent the infection being re-introduced. The maritime restrictions were a great source of inconvenience to Queensland shippers, but the safety of the people rendered it necesary to impose them. But the Queensland Attorney-General, Mr. Blair, has expressed the opinion that one State cannot constitutionally restrict the trade of another by the enforcement of maritime regulations that are said to be necessary to protect the health of the people. The Board of Health, however, maintains that the regulations are imposed purely for sanitary reasons, and that it undoubtedly possesses the powers that have been exercised in regard to fodder and grain from Queensland. The President of the Board of Health, Dr. Ashburton Thompson, explains that the opinion of the Attorney-General of this State is that the regulations are constitutional. We understand that the Premier of Queensland has now written to the Prime Minister of the Commonwealth, protesting against the precautions insisted on by the New South Wales Department of Health on vessels from that State in consequence of the existence of the plague. This letter has been sent to the Premier of New South Wales, and it is probable that the matter will come before the High Court. We must congratulate the President and the Board of Health upon the careful attention that is being given to the question of the prevention of a recrudescence of the plague in Sydney.

Support of Hospitals in Queensland.

The Treasurer of Queensland (Hon. W. Kidston) has recently expressed himself in favour of the adoption of a modification of the system existing in New Zealand for the maintenance of hospitals, which is done through a rate levied by the local authorities. In his opinion a very great improvement can be made in the financing of the hospitals and the maintenance of the charities. The basis of revenue of the hospitals and charitable institutions means an uncertain revenue; and the revenue has a tendency to fall off when it is most required. His idea is to provide a better and more reliable source of revenue, which is likely to be welcomed by those who have taken an active interest in the management of such institutions, because owing to the reduction in the Government endowment and the general depression during the past two or three years, hospital committees all over Queensland have been placed in a difficult position as to funds, and the men who voluntarily do the work of these institutions have in many cases been forced to the unpleasant duty of personally soliciting subscriptions. The matter has not yet been considered by the Queensland Government, but it is probable that some such scheme as suggested by Mr. Kidston would be favourably considered.

Proposed External Maternity Department at Women's Hospital, Melbourne.

At a meeting of the Melbourne Women's Hospital committee a few days ago a letter was received from Dr. Rothwell Adam, a member of the medical staff, in which it was suggested that an external midwifery department be formed, with the object of providing for the nursing and professional attendance of women in their own homes. It was thought that such a scheme would largely increase the usefulness of the institution, inasmuch as it would provide help for those who desired such assistance without compelling them to have recourse to charity, and would be of advantage for educational purposes, experience having shown that such departments were a success in Great Britain and America. A scheme could be adopted which would not interfere with private practice or increase the expenses of the hospital. It is well known that this plan has worked very well in connection with the Rotunda Hospital, Dublin. It was resolved that the medical staff be asked to formulate a scheme in accordance with the suggestion, providing that it was approved of by the members of that body.

Government Support to Victorian Charities.

In connection with the annual Government votes to the charities throughout Victoria, Mr. Bent has made an important regulation. Being under the impression that the hospitals are not receiving nearly sufficient local support, he has decided that in future, after allocating the grant on the basis of the daily average of inmates, he will give the full amount only if it be found that the particular charity has received from municipalities, entertainments, churches and private subscriptions an amount equal to the Government vote. Under this arrangement the maximum amount that any hospital will be able to claim will be the total obtained from the sources mentioned.

The Housing of Consumptives in Adelaide.

A protest against the decision of the Government to convert the old lunatic asylum on North Terrace into a home for incurable cancer and consumptive patients was made by a large deputation to the Premier recently. The Mayor of Adelaide introduced it, and, with the assistance of nine speakers, pleaded for the interests of property-owners and residents in the suburbs contiguous to the old asylum, as well as for the welfare of the patients themselves. They stated that already a number of tenants had left the locality. The Premier very properly blamed the deputationists for having created a scare. He ridiculed the idea of danger, and read the opinions of several prominent medical men to prove the absolute safety of the course they were following. He intimated that the necessary expenditure on the building had already been practically incurred, and gave the deputation no hope that their wishes would be complied with. We heartily congratulate the Premier of Adelaide on the attitude he has assumed on this question, and we are glad that some provision is being made for the maintenance of cases of chronic and advanced pulmonary tuberculosis in a suitable building, this being a most important proceeding in the interests of the public health and the prevention of the spread of the disease.

Deaths in the Profession in Brisbane.

We much regret to record the deaths of two well-known medical practitioners in Brisbane. Dr. John Ure, of George-street, died suddenly while on a visit to Sydney early in this month. He became a Licentiate of the King's College of Physicians in Dublin in 1863, and had been practising in Brisbane for many years. Dr. A. W. Robertson died suddenly on March 9th at his residence, Bowen Terrace, Brisbane, at the early age of 38 years. We hope to publish fuller particulars of these two gentlemen in our next issue.

BRITISH MEDICAL ASSOCIATION NEWS.

PROCEEDINGS OF AUSTRALASIAN BRANCHES.

New South Wales.

Council Meeting.

The Council met at the Association Rooms on Friday, February 12th, 1904. Present: Drs. Brady, Crago, Rennie, Pockley, Beeston, Fiaschi, Foreman and Newmarch.

The minutes of the previous meeting were read and confirmed.

Mudgee Hospital Dispute.—Letters were read from Drs. Lester and Hawthorne asking the Council to reconsider its previous decision. Resolved—"That the Council, after careful consideration, regrets that, having no *locus standi*, it is unable to interfere in the question of the medical officership of the Mudgee Hospital.

Balmain Friendly Societies' Dispensary.—Dr. Crago reported that Dr. Shirlow had resigned his position, and that an advertisement had been put in the daily press asking intending applicants to first communicate with the secretary of the Branch.

Medical Defence Union of Victoria.—Letter from the hon. secretary asking that certain circulars in connection with the medical officership of the Bendigo United Friendly Societies be sent to the medical men of this State.—Circulars to be sent as requested.

Dr. Crago reported that Dr. Ellen Wood had re-applied for appointment to the Balmain Friendly Societies' Dispensary.

Letter was read from a member asking if there was any objection to his sending a sealed letter notifying resumption of practice to his patients. Dr. Crago's reply approved.

Grooms and Coachmen's Union.—Dr. Crago reported that a defence union had been started by the employers interested.

British Medical Association.—Dr. Hankins to be written to asking him to interview the General Secretary in regard to the question of the annual subscription of the Australian branches.

Annual Meeting.—The same arrangements as last year to be followed.

Dr. Beeston suggested that an organising secretary be appointed to visit the country practitioners.

Dr. Crago read the balance-sheets for the year, and explained the present position of the AUSTRALASIAN MEDICAL GAZETTE.

The Council met at the Association Rooms on Thursday, 3rd March, 1904. Present—Drs. Brady, Crago, Rennie, Hinder, Pockley, Foreman, Worrall, Newmarch and Dick.

The minutes of the previous meeting were read and confirmed.

Letter was read from Dr. Fiaschi, stating that he did not intend to stand for election as councillor for the ensuing year.

Balmain Hospital.—Letter was read from Dr. Carruthers, hon. secretary of the Balmain District Medical Association, with reference to the medical officership of the Balmain Hospital.

Balmain Friendly Societies' Dispensary.—Letter read from the hon. secretary of the Balmain District Medical Association, endorsing the action of the Council in declaring the Balmain Friendly Societies' Dispensary "inimical to the interests of the profession."

Grooms and Coachmen's Union.—Letter from Dr. Carruthers on the above matter was referred to Dr. Abbott to be dealt with.

Temora Hospital.—Correspondence was read from Drs. Bennetts, Cookson, Crawford and Robertson; also a letter from the president of the hospital. Resolved —"That the Council considers it outside its province to interfere with any medical man starting practice in any town or applying for any hospital appointment." Resolved—"That the president of the Temora Hospital be informed that it is not unusual for the Council to insert such advertisements, and the Council would be much obliged if the president would state what he objects to in the advertisement so that the objections may be specifically replied to.

Australian Natives' Association.—Letter was read from the president of the Australian Natives' Association asking for reconsideration of the matters in dispute. Resolved—"That the Council, after careful consideration, fails to see any reason for altering its previous decision."

Letter was read from Dr. Andrews, of Albury, with reference to the new Medical Association on the border.

South Australia.

The first monthly meeting of the year was held at the University at 8 p.m. on Thursday, 25th February, 1904. The President (Dr. Jay) occupied the chair, and 21 members and several visitors were present.

EXHIBITS.—Dr. SWIFT showed a girl with an ulcer on the dorsum of the hand. There was a general consensus of opinion as to the diagnosis, but it was considered advisable to await the development of symptoms before adopting specific treatment.

Drs. Brummitt and Gunson also showed patients; and specimens were shown by Drs. Evans and Cavenagh-Mainwaring, and some skiagraphs by Dr. Gunson.

Papers were then read on some rheumatic subjects by Drs. GAULT (see p. 108), MOULE (see p. 109), and SWIFT (see p. 106). A long and interesting discussion resulted.

Queensland.

A MEETING of the Branch was held on Friday, March 4th, Dr. W. S. Byrne (President) in the chair, with an attendance of 27 members.

Dr. LOCKHART GIBSON exhibited several patients suffering from the effects of lead-poisoning.

The PRESIDENT welcomed Dr. Orr, after a prolonged holiday.

Dr. ORR replied.

The PRESIDENT announced that the question of professional advertising had been brought under the notice of the Council, and that the Council had thought it necessary to frame certain recommendations, which were placed before the Branch for consideration. After considerable discussion the recommendations of the Council were adopted. They were as follows:—A medical practitioner commencing practice may advertise the fact in the lay press for a period not exceeding three months; such advertisement may state the name, address, qualifications, hours, and speciality (if any). Standing advertisements and illustrated advertisements shall not be permitted. Removal notices may appear for one month. Holiday notices and return to practice notice may appear for one week. It was also resolved that letters be written to the editors of the Brisbane papers pointing out that the Branch disapproves of the publication of the names of medical men engaged in private practice in connection with interviews relating to medical subjects.

Dr. TURNER read a paper on the "Notification of Phthisis."

Dr. LITTLE supported Dr. Turner's contentions, and moved—"That (consumption being a communicable disease which is being spread by the neglect of necessary precautions in dealing with the expectoration of consumptive patients) it is advisable that every medical practitioner should be compelled to notify to the health authorities all cases of consumption attended by him." This was seconded by Dr. Turner.

Dr. LIGHTOLLER asked at what stage phthisis would be notifiable?

Dr. TURNER replied that in South Australia every case was notifiable as soon as diagnosed as phthisis.

Dr. TAYLOR opposed the motion. He thought that the hardships of the phthisical were sufficient already without adding to them by notification. He thought that the profession should not be in too great a hurry in the matter, and that if every medical man were careful to give each phthisical patient who came under his notice full and proper directions that the objects of notification would be attained. That, meanwhile, the Society for the Prevention of Tuberculosis was doing excellent work and should be supported by every member of the profession.

Dr. HIRSCHFELD was of the opinion that syphilis and gonorrhœa were equally dangerous as phthisis, and should always be notifiable if phthisis were. He quoted the statistics of German observers, who in a large number of post-mortem examinations had found that more than 90 per cent. of the bodies examined exhibited signs of having had at some time in life tuberculosis of lung. He thought that phthisical patients were already sufficiently handicapped without adding to their troubles by bringing the nature of their disease prominently before the public by notification, and that the great object of the profession should be to educate the public in preventive measures. He suggested that a landlord should supply a certificate of disinfection to tenants coming into a house which had been occupied previously by a consumptive.

Dr. LOCKHART GIBSON asked if the Act in South Australia had resulted in any reluctance on the part of patients to consult medical men in the fear that their disease would be pronounced to be phthisis, as had happened in the case of plague. He thought that as secrecy was practically impossible in a small community hardships would follow upon notification. He quoted a saying of Dr. Stewart, of Dalby, "That more good could be done by medical men in educating their patients than by tons of pamphlets from the Health Department."

Dr. WILTON LOVE considered that notification should be restricted to the larger centres of population.

Dr. NEILD foresaw a difficulty in relation to the reduplication of notification where one patient consulted several medical men.

Dr. HOPKINS said that the hardship was greater to the man who contracted the disease from a patient than to the notified one or his family, and that notification would be of immense value to the next generation.

Dr. FANCOURT MACDONALD compared the comparatively small danger of leprosy, patients suffering from which were notified and isolated.

Dr. ROBERTSON said that he had found, when engaged in post-mortem work, that a large number of bodies exhibited signs of old tubercular foci in the apices of the lung, and that there was an argument in favour of notification. He did not think that the hardship of notification was so great as some members believed, many patients being glad to get away to a climate where their chance of recovery would be greater. He said that as a fact medical men did not tell their patients that they had phthisis, and that compulsory notification would be the only way in which medical men would be compelled to do so.

Dr. **Salter** thought that education was better than notification.

Dr. **Forde** pointed out the danger that would be incurred by a patient who came from the country, and who returned home branded by notification. He thought that the suggestion of notification was premature.

The **President** thought that incipient cases of phthisis should not be notifiable.

Dr. **Turner** replied, and the motion being put to the meeting, was passed by a large majority.

Australasian Medical Congress.

ADELAIDE, SEPTEMBER, 1905.

THE following provisional list of officers has been announced :—

President : Professor E. C. Stirling, C.M.G., M.A., M.D. (Cantab.), F.R.C.S. (Eng.), F.R.S. Treasurer : W. T. Hayward, M.R.C.S. General Secretary : B. Poulton, M.D., M.R.C.S. Associate Secretary : J. B. Gunson, M.B., M.R.C.S.

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JOURNAL OF INFECTIOUS DISEASES.—"The Journal of Infectious Diseases" is a new American publication, founded by the Memorial Institute for Infectious Diseases in Chicago, and edited by Ludwig Hektoen and Edwin O. Jordan. It is to be devoted to the publication of original investigations dealing with the general phenomena, causation, and prevention of infectious diseases, both of known and unknown origin. The biology and chemistry of the various pathogenic micro-organisms, the physiology and anatomy of the morbid processes that they initiate, and the hygienic and sanitary problems to which they give rise are considered to be especially within the scope of this journal.

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16 O'Connell-street, Sydney.—[ADVT.]

REVIEW OF CURRENT MEDICAL LITERATURE.

SURGERY.

On Removal, after Suprapubic Cystotomy, of the Prostate and of the Prostatic Urethra for Senile Enlargement of the Prostate.

Moynihan (*Annals of Surgery*, January, 1904) contributes a short paper on the above, with a list of 12 cases. The first operation of the kind was done in September, 1901. In that case, while shelling out the prostate from its capsule, he was conscious of the extreme ease with which the separation of the gland took place. When the enucleation was approaching completion at the posterior part, the last few movements of his finger resulted, suddenly and quite unexpectedly, in the whole gland becoming free and lying loose in the bladder. On removing and examining the gland, he found that he had removed the prostate and the whole of the prostatic urethra as one complete whole. He was amazed at this, and not a little fearful as to what the result might prove to be; but at the end of five weeks the patient was able to pass his water in a perfectly natural manner, and the suprapubic wound had healed. That case proved so successful that he has since deliberately done 11 more in the same manner; two of the patients were medical men. Of the 12 cases, one proved fatal. The ages ranged from 56 to 73. One of the patients had undergone a suprapubic operation for stone 14 years before.

The operation is carried out as follows:—The bladder is washed out thoroughly with a solution of carbolic acid, 1 per cent., and finally filled with 10 or 12 ozs. of that fluid. The bladder is opened above the pubes, and the left forefinger introduced, and the lotion allowed to escape from the bladder. A silkworm gut suture is passed through the wall of the bladder and the whole thickness of the abdominal wall on each side, tied, and left long. These sutures are removed after three or four days, by which time the bladder will be fixed firmly to the hinder surface of the abdominal wall. With the left forefinger in the bladder, a snip is made with sharp-pointed scissors into the mucous membrane of the trigone, immediately behind the internal meatus of the urethra. The tip of the finger then deepens and gradually enlarges this small opening until the mucous membrane is felt to be loosened a little. Two fingers of the right hand (gloved are then passed into the rectum, and between these and the thumb pressed into the perineum, the prostate is firmly held while, with the left forefinger, the stripping of the prostate is commenced. This is generally very easily accomplished. The surface of the lobes is rapidly cleared; the opening in the mucous membrane is torn larger until it completely encircles the internal meatus, and, finally, the anterior portion of the prostatic urethra at its junction with the membranous portion is torn through, after the prostate is elsewhere entirely free. The enucleation is, as a rule, performed in from three to five minutes. The fingers are now removed from the rectum (the glove removed by an assistant) and a pair of vulsellum forceps passed into the bladder to seize and remove the loosened prostate. A catheter is passed and the bladder freely flushed with hot sterile salt solution, or one per cent. carbolic lotion. A large rubber tube is passed into the bladder, and a couple of stitches introduced into the wound. The tube is removed at the end of 48 hours. On the fourth day, and on each succeeding day, a catheter is passed and the bladder freely washed out with dilute carbolic acid lotion. On the seventh day a catheter is tied in and a drag is placed upon the suprapubic wound. The catheter is not removed for five or six days, when a new one is introduced.

A Source of Infection during Operation hitherto not sufficiently recognised.

Mendes De Léon, of Amsterdam, in an address delivered before the British Gynæcological Society (*Medical Press and Circular*, January 27, 1904) points out that while no less than thirty papers have been published during the past five or six years dealing with the way we should sterilise our hands, very little attention has been paid to the breath and saliva as sources of infection. That saliva is discharged in the act of speaking may be proved by speaking on to a looking-glass held from 25 to 30 centimetres from the mouth, as after speaking a few words the surface of this glass becomes spread over with small drops of saliva. Huebner, after rinsing his mouth with a culture of *bacillus prodigiosus*, spoke on to agar plates prepared for the experiment, and in twenty-four to thirty-six hours a multitude of red colonies were distinctly visible upon the plates. De Léon, in order to exclude the microbes of the air, had a box made with an opening about as large as the mouth on its upper side, and a sliding drawer at its base. After sterilising the apparatus he opened the sliding drawer, put an agar plate upon it, and shut it immediately, so as to be sure there were no aërial microbes in the box. He then spoke in the box the words which he had spoken during an operation—which had been written down by an assistant. The plate, which was shown to the meeting, contained colonies of streptococci, diplococci and staphylococci. The author had in all made hundreds of such experiments, and invariably found streptococci, diplococci, staphylococci, and an aërial microbe. Careful calculations were made to ascertain the number of microbes in a drop of saliva, with the result that 4375 was arrived at as the probable number. As fully sixty drops of saliva are given off in speaking 200 words—which is supposed not to exceed the number spoken at an operation of average length—the number of microbes that might fall into the wound would be about a quarter of a million. To prove the virulence, or otherwise, of mouth organisms about 60 animals—guinea-pigs and mice—were inoculated with cultures of microbes, procured from the author's own mouth, with the result that eight guinea-pigs and ten white mice died. Experiments to find a remedy against this source of infection point to the wearing of a respirator, containing some cotton-wool, as the most effective, as agar plates spoken on through this remained sterile, while numerous colonies grew after speaking through a gauze mask of either one or two thicknesses.

One Thousand Abdominal Closures by a New Method without a Known Hernia.

Baldwin (*Annals of Surgery*, November, 1903), with a personal experience of over 2000 cœliotomies, has finally adopted a method which in something over 1000 cases has failed to show a single known hernia. He discusses the through-and-through suture of silk, silver wire, or silkworm gut, and the buried suture of silver wire or silkworm gut, and condemns them—the former because it fails to secure coaptation of the fascia, the latter because after some months the silver wire or silkworm gut inevitably causes trouble. Chromicised catgut that would last from two to four weeks would be the ideal material if it could be made and kept sterile until absorbed, but the risk of it becoming infected by the fingers of the operator or other cause is almost unavoidable. Since June, 1897, Baldwin has used the method he now describes. At first he used silver wire, but soon found that it did not possess the tensile strength to be satisfactorily used in that way, as it occasionally broke during its withdrawal. He now uses annealed iron wire, tinned, No. 26. It is strong, flexible, and tough, and easily sterilised by boiling. In closing an ordinary abdominal incision made in the median line—

(1.) The bellies of both recti are exposed so that they will be brought into direct apposition when the sutures are tightened.

(2.) Through-and-through silkworm gut is then introduced *from within out*, merely the edge of the peritoneum being caught, and the needle is passed well back through the muscle and skin to a suitable distance from the margin.

(3.) The fascia is next brought together by an over-and-over stitch, using a doubled thread of either coarse silk or cotton. This is introduced into the needle so as to give a loop about 2 ft. long. To the end of the loop is attached the wire, which is sharply bent upon itself, so as to be readily drawn through the tissues. The over-and-over stitch is so passed as to take in about a quarter of an inch of the edge of the fascia, and includes no other tissue. It is introduced very loosely, so that each turn can be caught later with the finger. As it reaches the end of the incision, it is passed from within out through fat and skin, so as to make its exit an inch or more above the end of the incision. By means of this guide thread, the wire is introduced loosely, so that it lies in the wound as a helix, the end of the wire appearing through the skin as the last of the thread is withdrawn. Care should be taken to see that the fascia which is thus brought together has been carefully cleaned of fat.

(4) A handled needle, with an eye at the point, is then introduced through the skin and fat about an inch from the other end of the incision, and brought out just above the fascia so as to engage the other end of the wire, which is then withdrawn. Each end of the wire is passed through a small gauze pad. A perforated shot is placed outside each pad.

(5) The incision is carefully dried, and while an assistant draws up the ends of the silkworm gut, so as to secure apposition of the peritoneum throughout, the wire helix is drawn straight by traction with forceps on each end, care being taken to see that no kinks are formed during this process. The perforated shot are are now pushed down against the pads and clamped.

(6.) The fascia is thus held in absolute contact, and the operator can see that not a bit of fat or muscular tissue intervenes. The silkworm gut is then tied in the usual way, care being taken that it is not drawn too tight, as this is probably the most common cause of stitch abscesses. The silkworm gut precludes the possibility of any dead spaces. This method is not suitable in an abdominal wall enormously thickened with fat. In that case the author uses fine catgut for the peritoneum and sutures the muscle and fascia in two layers with chromocised catgut. He closes the skin and fat with through-and-through silkworm gut. (Gloves are always used in closing incisions in this way.) A wick drain of iodoform gauze, wrapped in guttapercha tissue, is inserted, and allowed to remain till the next day. As a rule the dressings are not removed for ten days, when all sutures are withdrawn. The wire having been drawn straight at its introduction is easily removed by dividing it under the pad at one end and making traction on the other end. A bandage is worn for about three months.

The Radical Cure of Femoral Hernia. A modification of the author's operation.

Nicoll (*The Medical Press and Circular*, January 6th, 1904) states that femoral hernia, as met in practice, fall into one or other of two classes in the matter of operation procedure. The simpler cases are capable of radical cure by the simplest of measures. The more severe cases, on the other hand, large hernia in patients with corpulent abdomen or other unfavourable feature, are apt to tax the principles of the most ingeniously devised methods. The author described a method of operating at the meeting of the British Medical Association in Manchester, August, 1902, which he originally adopted for the more severe and unfavourable cases of femoral hernia only, but has now extended its practice to all cases. The operation consists of two parts:—(*a*) *Obliteration of the Sac and* (*b*) *Closure of the Femoral Ring.* In the first part the sac is exposed and cleared from surrounding tissues. It is then opened longitudinally in its middle line and cleared of contents. The neck is separated from surrounding tissues for about an inch around the abdominal aspect of the ring. The sac is next bisected from base to neck. An aperture is next made in one half, near the neck, through which the other half is drawn—it may be well to give it one half turn before interlocking. Now reduce the whole sac through the femoral ring into the extra-peritoneal space previously cleared for it on the abdominal side of the ring. If the sac be large, part of it may be cut away. To close a femoral ring, an incision (bone deep) is made from the femoral vein along the ramus of the pubes to the region of the pubic spine, and the periosteum detached to a limited extent. The bone—pubic ramus—is then drilled in two places, half-inch to one inch apart, A loop of stout catgut or other absorbable material is passed through the aperture by means of a probe or needle. Divide the loop of ligature and thread one end in a large curved surgical needle, and pass it as a mattress suture through Poupart's ligament. Repeat this with the 2nd end, carrying it through Poupart's ligament at a higher level, avoiding the deep epigastric artery to the outer side, and in male patients, the spermatic cord above. Bring both ends of the ligature —by means of a probe—through the second drillhole in the bone, and tie the ends of each loop separately over the front bone, thus bringing down Poupart's ligament to the postero-superior surface of the bone, constituting what is in effect an extension outwards of Gimbornat's ligament. The operation is completed by uniting the detached margin of the pectineal origin and the pubic portion of the fascia lala to the "anchored" Poupart's ligament. The modification of operation—in cases where a drill is not at hand—is to divide the periosteum along the postero-superior aspect of the ramus, and to turn up the anterior flap to a slight extent, and stitch Poupart's ligament to this flap. (The paper is freely illustrated).

DISEASES OF EAR, NOSE AND THROAT.

Results of Surgical Treatment of Cancer of the Larynx.

Botella (*Boletin de Lariengologia*, August, 1903) gives statistics of 105 cases of cancer of the larynx. In 13 the diagnosis was not confirmed histologically: of the remaining 92, 45 were inoperable on account of extensiveness of the disease, 20 of them were tracheotomised, with prolongation of life from a few days to 14 months. Of the 47 operable cases, 26 accepted operation as follows:—

One endo-laryngeal extirpation, cured; eight thyrotomies, with resection of soft parts—all recovering from operation, but with the exception of two, whose subsequent data are unknown, all recurred—one by continuity—subsequent hemi-laryngectomy; another died in two months of cancer of the stomach; three recurred at the fourth, sixth, and eighth month and one at two years, four transhyoideal pharyngotomies, with thyrotomy, with three deaths from operation, one cardiac collapse, and two from septic pneumonia; one survived the operation, but died in two months from fibrinous pneumonia; seven hemi-laryngectomies with three deaths from operation, one from cardiac collapse and two from septic pneumonia.

Four cases recovered, and have been under observation three, ten, and seven months. Three total extirpations all survived operation—one died in six months without recurrence, one from glandular recurrence in seven months, and the other in 20 months.

The author considers the only indication for electing the endo-laryngeal operation to be the absence of glandular involvement, and the limitation and accessibility of the tumour.

The Dressing of Brain Abscesses.

Whiting (*International Journal of Surgery*, September, 1903) states that the method of dressing acute brain abscesses should differ from that of the chronic brain abscesses. In acute brain abscess the gauze packing should be reduced to the smallest possible quantity that will maintain a pervious channel to the bottom of the abscess. A single wick of iodoform gauze, the size of a crow quill, will answer. The chronic brain abscess, with its firm resisting fibrinoplastic membrane, with its abundant discharge, calls for a different line of treatment. Here the cavity should be thoroughly mopped with absorbent cotton, and sufficient gauze introduced to extend it. This dressing should be continued until the discharge diminishes.

Ligation of the Internal Jugular Vein in Lateral Sinus Thrombosis.

Oppenheimer (*Medical News*, Dec. 26th, 1903) says that when there are the least evidences of septic changes in the walls of the vessel or the contained thrombus, with extension to the jugular, that vein should be ligated, and the effected portion excised. The most difficult question to decide is that of preliminary ligation before exposing the sinus. The indications for the latter operation are septicæmia or neuroretinitis. After exposure of the sinus, ligation of the jugular before further procedure with the sinus itself is dependent on one of two indications. (1) Disintegration of the lower portion of the clot as shown by aspiration. (2) The transmission of respiratory movements to the sinus. After the sinus has been opened, two conditions call for ligation of the vein. (1) Extension into it of a thrombus becoming purulent. (2) A large, firm thrombus filling the sinus and extending well into the vein. The personal experience of the writer indicates that the vein should be ligated whenever local symptoms indicating its involvement are present.

Removal of the Tonsils as a Preventive of Disease.

Koplik (*American Journal of Medical Sciences*, Nov., 1903) points out that tuberculosis of the tonsils may occur, and that frequently the tonsils may act as a portal for tubercular infection. Primary tuberculosis of the tonsil is rare, but the tubercle bacillus and the results of its presence can often be found in the tonsils of tubercular patients, and even in the tonsils of those who may not be known to be tubercular. Practitioners of experience frequently meet with children suffering with large cervical glands which in modern view are mostly tubercular in origin, and which are due in the majority of instances to the entrance of the tubercle bacillus through the respiratory, buccal, or tonsillar mucous membranes.

Persistent Nasal Hyperæmia cured by the Removal of Adenoids.

Wingrave (*Lancet*, December 19th, 1904) describes a case of a man, aged 21 years, who complained of intense and persistent redness of the nose, of two years duration. The onset was gradual. Patient was a teetotaller, and a very moderate smoker, and he enjoyed excellent health. Nasal respiration was free, and nothing abnormal was to be seen by anterior rhinoscopy. The tip, the alæ, and quite two-thirds of the nose was of an intensely vivid red colour, somewhat shiny, but not swollen, tender or painful. Being subject to indigestion, he was treated with alkaline tonics and aperients. After two months' treatment, he showed no improvement, but a prominence of the supra-nasal vein being noticed, the naso-pharynx was examined, revealing a large crop of adenoids. Their removal was soon followed by diminished redness of the nose, and in one month the organ became normal in appearance, and remains so. This case affords a striking illustration of the close relationship between the supra-renal vein and adenoids during a period of life in which neither are commonly found and further increases the already long list of troubles due to neglected adenoids. Its pathology admits of several interpretations. First, there is the mechanical, in so far that the adenoids themselves directly interfere with venous return, thereby producing the prominent supra-nasal venous arch in infants. Further again, their interference with breathing leads to a general increase of venous pressure, which the vessels in question specially show. A second view is that the adenoids are responsible indirectly by causing a reflex inhibition of a local vaso-motor influence.

Facial Erysipelas Caused by Erosions of the Nasal Septum.

Farlow (*Boston Medical and Surgical Journal*, 17/12/03) calls attention to a source of facial erysipelas which is not generally recognised—erosions of the nasal septum. These may exist without attracting the notice of the patient or the practitioner. He relates three cases, in all of which erosions on the septum were found during an attack of facial erysipelas. Cleansing of the nose and the application of antiseptic powders to the erosion were followed by rapid improvement. None of these patients complained of the nose sufficiently to have it examined, and yet when they came under his care each had a large open sore. The importance of the observations, particularly in recurrent attacks of facial erysipelas, is obvious.

THERAPEUTICS.

Ichthyol in Pulmonary Affections.

Rosenberg (*Medical Record*, November, 1903) states that sometimes we are called upon to treat cases of pulmonary tuberculosis in the early stages who are unable for various reasons to be sent away from home to a suitable climate, and we are compelled to do the best we can for them at home. He says that he has not found much benefit from the use of the ordinary remedies, such as codliver oil, forced feeding, guaiacol, or creosote, and he was forced to look round for some other remedy. He began using ichthyol internally, and while he does not for a moment hold up this drug as a specific, yet his results so far justify him in the belief that much benefit is derived from the use of it in certain cases. He administers it, not in capsules, but always mixed with water, in which it is soluble, before meals. There has been no gastric disturbance in any case, except a slight diarrhœa. In his hands it has proved of value in increasing assimilation, improving nutrition, checking waste, thereby increasing body weight and acting as a germicide against the tubercle bacillus. He records the following cases:—Case 1.—A male, 26 years of age, with a history of cough for six months, and a loss of weight of 20 lb. His evening temperature varied from 100° to 101°; a few râles at the left apex; appetite poor. He began taking ichthyol grs. 5 three times daily. His diet was increased, and he slept with the windows wide open. At the end of six weeks he had gained 27 lb. in weight, the cough had stopped, and the râles had disappeared. Case 2.—A woman, aged 40 years, had pleurisy several years before. She had lost flesh, had pain over the site of the old pleurisy, and râles over the right apex; the sputum contained tubercle bacilli; appetite poor. Ichthyol was ordered in 5 gr. doses three times a day. It was pushed until she took 30 grs. three times daily. She began to improve at once; cough lessened, the expectoration diminished, and she gained 30 lb. in weight after three months' treatment. At this time the sputum was declared free from tubercle bacilli. After three years' watching this patient remains a "cure." Case 3.—A female, aged 25 years. Her mother had died from pulmonary tuberculosis. The patient had a persistent cough after influenza, with much emaciation, and an evening temperature of 101° to 102°. The sputum contained tubercle bacilli. For two weeks codliver oil and guaiacol carbonate were given, and her general hygiene improved, but the disease did not improve, and the sputum became blood-streaked. Ichthyol was then substituted for the other remedies, and there was an immediate improvement. The sputum was at once changed in character and amount; cough entirely ceased within one month, at which time her weight had increased by 15 lb.; the number of bacilli gradually diminished, and at the end of nine months they had entirely disappeared. This patient has been under the author's observation for over two years, and there has been no return of the cough or of the tubercle in the sputum. These results are sufficiently striking to warrant a trial of this drug; they are specially instructive in view of the fact that climatic treatment played no part in the "cure."

Argyrol in the Treatment of Gonorrhœa.

Purdy (*Lancet*, December 19th, 1903), in recording his experience of the treatment of gonorrhœa at the London Lock Hospital, remarks that with each and every treatment he has seen good results in some cases and practically no improvement in others. The introduction of salts of silver in combination with organic substances marked a distinct advance in the treatment of gonorrhœa. Argyrol is a combination of silver with a proteid extracted from wheat. It is very soluble in water, and unlike the inorganic salts of silver it neither coagulates albumin nor precipitates chlorides. On being injected into the urethra it has been shown to be non-irritating in solutions of much greater strength than in the case of other silver salts in ordinary use in gonorrhœa. Christian, of Philadelphia, has recorded 49 cases of this disease treated with injections of argyrol. In 43 of these gonococci disappeared completely from the discharge in two weeks, nine cases were cured in two weeks, 17 cases in three weeks, seven cases in six weeks, and three cases in eight weeks. Swinburne, of New York, sums up the results of his experience of this drug: "This drug has decided gonococcidal powers; it has a decided effect in reducing and allaying the inflammation of the disease; it can be used safely in almost any strength and at any stage of the disease. I have not seen any unpleasant symptoms due to the use of the drug. In some cases a solution of 20 per cent. argyrol was used." The author gives details of several cases of the disease at the London Lock Hospital treated with this injection. He had seen no complications arise during the treatment. Chordee did not occur in any case. The only objection to the use of this salt is its cost. Like other silver salts it causes stains on linen, but these can be easily removed by a warm solution of iodide of potassium. With regard to rapidity of action and permanency of cure, he has seen no results from other injections which equal or even approach some obtained by argyrol.

Dietetic Prophylaxis against Uric Acid Calculi.

In an abstract of a paper by Klemperer, translated by Joslin in the *Boston Medical and Surgical Journal*, some useful hints on dieting as a prophylaxis against uric acid calculi are given. The uric acid of the urine comes from the nucleo-proteids which form the essential constituent of the nucleus of the cell. A meat diet favours uric acid, particularly the cellular organs like liver, kidney, etc., but a milk and egg diet with farinaceous dishes and vegetables causes no uric acid. One pound of meat in general produces in 24 hours 1·5 grammes of uric acid; on a milk and vegetable diet the uric acid falls to 0·4 to 0·6 grammes per diem. One half-pound of meat (red or white) or fish is a proper quantity to allow. Bouillon may also be allowed. With a preponderance of meat diet and little vegetable food the free uric acid in the urine reaches 80 to 90 per cent., while on a mixed diet the relation between free and dissolved uric acid is about half and half. By an increase of vegetable food the uric acid appears more and more as a salt, and is so excreted. If vegetable food is persisted in to the exclusion of other food, the urine finally becomes alkaline from calcium phosphate. Practically it is sufficient if the two forms of uric acid are excreted half and half. This is accomplished when large quantities of fruit and vegetables are eaten with moderate quantities of meat, fish and leguminous vegetables. A plateful of vegetables should be taken twice daily, and at least a pound of fruit. The uric acid will be excreted as a salt, when the diet is of a mixed character containing a moderate quantity of meat, if 15 grains of bicarbonate of soda be given five times daily. The more meat, fish and leguminous vegetables given, the more soda is required. The soda is administered to best advantage three or four hours after a meal. The necessary amount of soda bicarbonate to be given can be determined by the reaction of the urine.

Syphilitic Alopecia.—Besnil (*Journal Médical de Bruxelles*) recommends the cutting short of the hair, and the use twice weekly of the following ointment:—Oil of cade 45 grains, sulphur precipit. 15 grains, resorcin 4½ grains, salicylic acid 2¼ grains, benzoated lard 1 ounce. The morning after using the ointment the scalp should be washed with hot water and ichthyol soap.

Aristochin in Whooping Cough.—Kittel (*Therapeutische Monatshefte*, 1903) has found much benefit from the use of this drug in whooping cough. It was first recommended by Stursberg. As many centigrammes are to be given three times a day as the child is months old, if an infant; for older children 0·2 grammes may be given for a dose. The drug may be given in water or milk, and is readily taken by children. It does not seem to give rise to any ill-effects. Out of 36 cases thus treated, 25 were cured, and 7 others improved. The duration of the disease is shortened by the remedy, which appears to act most beneficially in infants under one year old. Appetite increases under its use, and the general condition is improved.—*The Practitioner.*

CORRESPONDENCE.

London.

(FROM OUR OWN CORRESPONDENT.)

Irish University Education—St. Bartholomew's Hospital—Therapeutic Value of Radium—Tetanus Antitoxin—The Antivivisectionists—London School of Tropical Medicine.

A SCHEME for the settlement of the difficult problem of University education in Ireland is at present under the consideration of Mr. Wyndham and the Dublin authorities. It is rumoured that the idea is to create one great Irish University, which will embrace Trinity College, Dublin; Queen's College, Belfast; and a new fully endowed and equipped Roman Catholic College in Dublin, each college remaining autonomous, and having the power of conducting its own examinations for degrees in the several faculties. The religious question offers a stumbling block to the realisation of this or any other scheme, and it is stated that Trinity College, though willing to throw in its lot with Queen's College, will not amalgamate with a Roman Catholic college. This attitude reflects a widespread feeling that, though a new plan of education, or at least some modification of the present system, is urgently required, it must be carried out in such a way that none of the colleges affiliated under a new University charter shall either directly or indirectly be under ecclesiastical control; that, in short, any settlement, to be acceptable and permanent, must be carried out on non-sectarian and strictly academic lines.

Sir Henry Burdett has recently communicated to the *Hospital* a trenchant article on the subject of the retention of St. Bartholomew's Hospital on its present site, in conformity with the recommendations of the Mansion House Committee. His view is that the plan proposed by the committee is a tinkering and insufficient one, which would eventually ruin the hospital at a cost of £350,000; whereas by the expenditure of £600,000—a sum which he thinks might be raised within five years—the institution might be converted into the best model hospital and medical school in the kingdom. In the course of his paper, Sir Henry Burdett says:—"St. Bartholomew's Hospital is our oldest and greatest medical school; it has sent forth from that school, and has at present representative medical men trained within its walls practising in London and the provinces, a vast army, equal to about one in nine of the whole of the 22,700 practitioners resident in England. Amongst Bartholomew's hospital men, 66 at present hold staff appointments in the general hospitals of London, and 117 hold appointments in the hospitals in the Provinces. Bartholomew's is worthily represented on the teaching staff of the Universities of Oxford and Cambridge, the Victoria University, University College, Liverpool, University College, Sheffield, the University at Birmingham, and the Bristol University College. Old students of this school are to be found at present serving on the staffs at least 20 special hospitals in London. The list of honours obtained by students of St. Bartholomew's Hospital, and the names of those practising in the United Kingdom, Royal Navy, Royal Army Medical Corps, Indian Medical Service, or resident abroad, fill no less than 25 closely printed pages of *St. Bartholomew's Hospital Journal* for September. Collectively they number at least 3250 distinguished medical men, including some of the most prominent members of the profession. I have merely summarised the figures, but a study of the names and a realisation of the wonderful ramifications and enormous influence represented by those who make up this splendid total must bring home with telling force the great debt of gratitude which the nation owes to St. Bartholomew's Hospital for its splendid services to the whole population in the past. It is not a little remarkable that throughout the controversy which has ranged around St. Bartholomew's Hospital during the last twelve months the voice of the medical staff has not made itself heard, and to this silence I attribute most of the mistakes and many of the dangers which at present threaten the future prosperity of our oldest and noblest hospital. It is due to the medical staff that at the meeting of Governors each Governor should be supplied with a copy of their report and recommendations, and that every member of the staff should be personally and individually invited to attend the Court of Governors, and to give expression to his views, so that any decision arrived at, and any vote taken, may be given with a full realisation of the problem in all its ramifications and of the dangers which must attend the adoption of an imperfect or an inadequate scheme which can but lead to one result. To tinker, temporise, to refuse to recognise plain facts, must end in disaster to the hospital, even supposing that the Governors were to have placed at their disposal to-morrow the sum of £350,000, which they require to make certain temporary and inadequate changes in the existing buildings, and to add to those buildings on the present site new buildings to a certain extent. In such an event, granted that the whole plan indicated by the committee as it stands can be carried out to-morrow, it simply means that within the next quarter of a century it will be necessary (1) to clear the site and build an entirely new hospital upon it, or (2) that a new site will have to be found, or (3) that the work of our greatest hospital will have to be carried on under conditions which will each year grow worse and worse, until the hospital must necessarily forfeit its present great reputation, and place upon the shoulders of the next generation a task which may permanently cripple its usefulness for all time."

Interesting accounts of the value of radium are being furnished from various sources. At a recent meeting of the Gesellschaft de Aerzte of Vienna, Drs. Hotzknecht, Schwarz, and Exner reported the results of experiments made with the new substance on animal tissues. They found that the rays from radium caused degenerative change in the cells of the skin and in the cells of the walls of the capillaries. A case of melano-sarcoma of the skin was shown in which an operation had been performed three years previously on the humerus, and in which subsequently a large number of cutaneous melano-sarcomatous tumours had appeared round the shoulder. After an exposure of about twenty minutes to the rays, emitted by three milligrammes of bromide of radium, the tumours diminished in size, and at the end of a month most of them had entirely disappeared. Another case was presented in which a patient suffering from epithelioma of the lip, which had recurred after two operations for its removal, had been subjected to six radium exposures of from 15 to 20 minutes each. Seventeen days after the first exposure the tumour had decreased remarkably in size, and it ultimately melted entirely away. In neither case was any obvious harm done to the surrounding healthy tissues. Dr. Macintyre, of Glasgow, and Dr. Mackenzie Davidson, of London, have also published satisfactory results from its use in the treatment of lupus and rodent ulcer. A considerable time must, no doubt, elapse before any confident opinion can be offered as to the true value of radium as a therapeutic agent, but enough is already known to show that it possesses powerful curative properties which, when better understood and more fully developed, may prove it to be a remedy which will to a great extent supersede both ordinary surgical methods and the Röntgen rays.

There is ample evidence to prove that antitoxin is of distinct value in tetanus, but it is perhaps not generally recognised that its neutralising power bears a relationship to the time at which it is administered. The sooner it follows the toxin into the system the more certainly will the maleficent potentialities of the former be counteracted. By the time muscular spasm becomes manifest, the toxin has so established itself in the tissues that antitoxin is capable of exerting its curative influence to a modified extent only. The phenomena of tetanus are directly due not to the action of the bacillus, but to the toxins which this micro-organism elaborates. The bacillus remains confined to its original seat of entry, but the toxin is absorbed, and is carried by the blood stream to the cerebral nervous system, where it enters into very close association with the substance of the nerve cells. When antitoxin is introduced into the circulation it can only neutralise such toxin as is still free in the blood current, but it is incapable of breaking down the union that has become established between the nerve cells and that amount of toxin which has already become incorporated with them. If this be true it follows that the time when antitoxin may be depended upon to exert its most potent influence is when the whole of toxæmic products of bacillary activity are still free in the circulation. In cases where there has been a copious absorption of toxin, the symptoms develop so rapidly that even the early administration of antitoxin fails to exert a favourable influence. This has led to some discredit being thrown upon its value under any circumstances, but such a conclusion is entirely erroneous. The point about its administration which demands emphasis is the necessity for giving it as early as possible after a suspicious exposure to the disease. Local treatment must, of course, never be neglected: the bacillus should, if possible, be destroyed in the wound at the earliest opportunity. The supply of toxin is thus cut off, and the quantity already absorbed is more likely to be within the compass of the antitoxin's neutralising possibilities.

The well-meaning but ill-informed persons whose enthusiasm for the welfare of the lower animals tempts them to cast discretion to the winds and support their views by unverified and ridiculous statements uttered against those who undertake painless experimentation on animals have received a well-merited rebuke in the verdict recently given in the case of Bayliss v. Coleridge. These self-constituted philanthropists choose to forget that in this country all vivisections are performed under the restrictions of a very rigid license, and by men who, in addition to having a scientific purpose to serve, may claim to be at least no less humane than their critics. In the present instance an action for libellous slander was brought by Mr. William Bayliss, Assistant Professor of Physiology at University College, against the Hon. Stephen Coleridge, honorary secretary of the National Vivisection Society. The cause of the action arose from the reading at a meeting in St. James' Hall, and the subsequent publication of the following statement, which the defendant declared was that of an eye-witness:—

"I have attended many lectures at the Physiological Laboratory of University College. I have constantly heard while there the long-drawn howling and whining like that of dogs in terror and agony. When the door of the lecture-room was opened the sound of this grew louder; when the door was again shut the cries seemed to be fainter. On February 2nd, this year, I saw an experiment by Dr. W. M. Bayliss on a dog at this laboratory. A big brown dog of the terrier type was brought into the lecture-room, stretched on its back on the operation board. Its legs were fixed to the board, the head held firmly in a head-holder, and it was muzzled so tightly that it was now deprived of every power to give audible expression to pain. In the skin of the abdomen there were several scarcely-healed scars and wounds; on one of them that seemed rather fresh there were left a pair of clamping forceps. It was evidently not the first time that the dog had to serve science. The internal organs of the abdomen had surely had their turns of operations in previous experiments. The neck was opened widely for the stimulation by electricity of a certain gland. The dog struggled forcibly during the whole experiment and seemed to suffer extremely during the stimulation. No anæsthetic had been administered in my presence, and the lecturer said nothing about any attempts to anæsthetise the animal having previously been made. When an anæsthetic has been given, good care is generally taken to tell the audience about it, and, as a rule, the anæsthesia must be kept up by repeated administration of the anæsthetic used. Nothing of the kind was done here, and the violent and purposeful struggles of the animal indicated complete consciousness. The dog was carried out still fixed to the board after half an hour." "Is not this," defendant asked, when he had read the above statement, "enough to make the blood run cold? If this is not torture, let Mr. Bayliss and his friends—Lord Lister and Sir Victor Horsley—tell us in Heaven's name what torture is." After a trial lasting over several days a special jury found a verdict for the plaintff, to whom they awarded damages to the tune of £2000. This verdict will be regarded with complete approval not only by the medical profession, but also by the public at large. To most ordinary minds the story narrated by Mr. Coleridge carried its own contradiction written large all over it. In accepting with implicit belief the evidence of two Swedish lady students, and re-telling their story without attempting to verify the villifying statements against a distinguished scientist which it contained, the defendant certainly displayed a somewhat less than average desire to be fair and to get at the truth. His behaviour savoured of a reprehensible malice which did not scruple to circulate accusations involving not only a breach of the law but also heartless cruelty to a dumb and helpless animal. Professor Bayliss is to be congratulated upon the courage which enabled him to seek the verdict of a jury of his countrymen upon a question involving such grave reflections upon his personal character and his methods of work. The success of his action is the best answer to those who, like the Hon. Stephen Coleridge, seek to advance their own cause by coarse abuse and unworthy suggestion aimed at those who differ from them in opinion.

On Monday, December 7th, a large audience of ladies and gentlemen assembled in one of the lecture theatres of the Tropical Hospital to hear an address from Sir Patrick Manson on the achievements and ambitions of this the youngest and most rapidly-growing medical school in London. The occasion which provoked the lecture was the approaching departure for the East of Sir Francis Lovell (the dean of the school) on a second mission to secure increased financial assistance for further expansion of the useful work which has been so auspiciously begun. Sir Patrick Manson took advantage of the opportunity to make public acknowledgment of the deep obligations which the school owed to the late Colonial Secretary (Mr. Chamberlain), who had been the mainspring of the whole movement for education in tropical medicine in this country; and also to the Seamen's Hospital Society, which had provided the London School with a suitable habitation, and had otherwise done everything within its power to support Mr. Chamberlain in the great educational policy which he had so warmly fostered. He went on to say that since the inauguration of the school in October, 1899, no fewer than 354 students had passed through its portals, and that each session had shown a gratifying increase in numbers over all its predecessors. Among a few of the more notable triumphs already won by the London School within the short period of its existence, Sir Patrick Manson was able to point with pardonable pride to the discovery by Dr. Low that the filaria of elephantiasis, like the plasmodium of malaria, gains access to the human tissues by the proboscis of the mosquito; to the experiment of Drs. Sambon and Low, who succeeded in living for three or four of the most unhealthy months of the year in the Roman Campagna without contracting malarial fever by adopting careful measures to prevent the access to them of mosquitoes; to the final and conclusive proof that malarial parasites are conveyed by the anopheles afforded by the importation of infected mosquitoes from Italy, and the development of the disease in healthy individuals who allowed themselves to be bitten in the laboratory; to the discovery in the Gambia Colony by Dr. Forde of the trypanosoma; and to the subsequent demonstration by Dr. Castellani (both pupils of the school) of its association with sleeping sickness. He was able to make the gratifying announcement that, by arrangement with the Government of the Federated Malay States, Dr. Daniels, a late superintendent at the school, had been placed in charge of the extensive research laboratory which exists at Kuala Lumpur, and that in future each superintendent will, after about three years' service at the London School, be transferred for a like period to the Kuala Lumpur Laboratory. At the close of his interesting address, Sir Patrick Manson pointed out that the school's ambition to gather fresh laurels in the field of original investigation was cramped for want of money. To furnish the museum and library on an adequate scale, and for many other pressing and important requirements, a sum of about £100,000 was necessary, and for this amount he made an earnest appeal to the rich and charitable of this country, and also to those in our colonies and dependencies beyond the seas, who, even more than such as live at home comfortably secure from the dangers of tropical disease, should respond according to their ability in the spirit not only of a selfish regard for personal safety, but also of a patriotic desire for the welfare of the Empire. "He who gives to the poor lends to the Lord" might not inaptly, he concluded, be thus parodied: "He who gives to the London School of Tropical Medicine lends to humanity." A hearty vote of thanks was moved to the lecturer by Sir William Church, president of the Royal College of Physicians, and carried by acclamation.

Victoria.

(FROM OUR OWN CORRESPONDENT.)

Friendly Societies and the Medical Defence Association—A Samaritan Guild.

THE war between the Friendly Societies' Institute and the Medical Defence Association of Victoria still lingers on. Since my last letter the Bendigo United Friendly Societies' Medical Institute and Dispensary committee have been advertising for a fresh medical officer, and the M.D.A.V. sent round a circular to all medical men asking them not to apply, and giving good valid reasons for so acting. This incensed the Bendigo United Friendly Societies' Medical Institute and Dispensary committee to such an extent that they replied by sending a circular to all medical men registered in this State and also in other States as well. This circular denies all that the M.D.A. affirmed in their note, confuting each item separately, and declaring with their usual impertinent style that everything stated by the M.D.A. was a parcel of lies. Their late medical officer is referred to in the most contemptuous manner as "the last 'verdant' little acquisition to the fold, and representing him as browsing round and bleating to have given to him some of that food he has been so long accustomed to and on which he has thrived so well." Every item in this circular might be picked to pieces; but as I am informed that the M.D.A. of Victoria will see this matter through to the bitter end, I will say no more about it for the present, and will conclude by quoting from the B.M.F.S. circular the following cheerful item for the benefit of the profession at large:—"Preparations of war having thus been so far perfected by the Medical Defence Association, hostile demonstrations were made against the Balmain Friendly Societies' Medical Institute and Dispensary in N.S.W. and the Brunswick and Coburg Medical Institute and Dispensary in Victoria, but reverses awaited the offensive defensive association. Now open war has been declared and is simultaneously being waged by the M.D.A. against the Brisbane United Friendly Societies' Medical Institute and Dispensary, and the old, but by no means decrepit, though just created, institution of its nature in Australasia, the Bendigo United Friendly Societies' Medical Institute. The Bendigo U.F.S. Board accept the challenge as issued in the 'note' of misrepresentation issued by the M.D.A. and will rely on their well-tried, trusty, and proved weapons of defence, namely, truth, candour and fair dealing."

Dr. Doyle's (Newcastle) letter in reply to the B.A.F.S. circular has been printed in several up-country papers, and seems to hit the mark pretty accurately, and if all the professors in this State would only act together and rouse themselves from their lethargy it would be an easy matter to squelch these sweating institutes.

It is greatly to be regretted that the Defence Association in Victoria is not connected with a large organisation such as the British Medical Association, as is the case in New South Wales; for then, stronger pressure could be brought to bear on blacklegs, who will always be present in every profession, and who ought to be made to feel their position to a much greater extent than they do at present.

The Brunswick and Coburg Institute is not flourishing, and report hath it that numbers of the members are leaving and returning to their old doctors, under much more advantageous terms to the latter than they had before.

The metropolitan hospitals have been sadly overcrowded this season, owing to the great increase of typhoid fever; and our old friend, the Infectious Diseases' Hospital, is still unoccupied.

A Samaritan Guild has been proposed in connection with the Alfred Hospital, with the following objects:—(1) To collect and distribute funds for (*a*) surgical instruments and appliances (including artificial limbs for patients unable to afford them); (*b*) suitable clothing for patients who would otherwise leave the hospital insufficiently or improperly clad; (*c*) articles for the comfort and pleasure of patients, but which should not be chargeable to the Hospital funds, such as books, pictures, ward clothing, besides fruit and other dainties when permissible; (*d*) the removal of patients to their homes or other institutions, when circumstances render this desirable, and in urgent cases, the maintenance of patients not eligible for admission to a convalescent home until they are fit to return to their work. (2) For members to periodically visit the wards; to personally interest themselves in patients, more particularly those without friends or relatives near at hand; read to them or write letters and convey messages for them, thus relieving anxiety; to try to obtain employment for those about to be discharged, whose sickness has caused them to lose their situations, and to do everything possible to comfort the victims of disease, apart from the inculcation of anything that savours of sectarian religion.

The annual dinner of the Victorian Officers of the Australian Army Medical Corps takes place on the 16th March, and a great many invitations have been sent out.

THE OUTLOOK FOR THE MEDICAL PROFESSION.

(*To the Editor of the Australasian Medical Gazette.*)

SIR,—It is well for those parents who contemplate educating their sons and daughters for the medical profession to consider the following important points:—

1. The profession is already overcrowded.
2. The general health of the public is improved chiefly through the work of medical men themselves in the field of hygiene and preventive medicine.
3. The number of charitable institutions granting free medical and surgical attendance is increased, and their efficiency also increased to such an extent as to bring them above the standard of infirmaries and poorhouses. This makes the public seek readily aid from them which some years ago was only done as a last resort.
4. The scientific training of nurses has taken a great deal out of the doctors' hands, and, together with this, the increase of private hospitals has made the doctors' continuous attendance and supervision far less necessary and important. All this tends to lessen the bill, and in a general way lessens the amount the public has to pay the doctor.

In addition to these points there are a host of other factors at work to reduce the scope of action of the medical man, particularly the general practitioner. All the above-mentioned are not injustices, save in cases where public hospitals are abused. They are, in fact, useful adjuncts to the doctor, making his work more efficient and reducing the great burden of work which many practitioners have had to carry.

When mentioning charitable institutions I did not mention lodges, but I think they might be included in this category in that doctors agree to attend the necessitous poor under a contract system for a mere pittance. We have long heard of the unsatisfactory nature of this necessary evil.

Excepting the state of things in small and distant country towns with their scattered districts, let us review the state of things in medical practice during the last few years. An ordinary case of illness or indisposition is treated first by parents, aided or not by a domestic handbook, and remedies—simply home ones or some proprietary medicines or tabloids—employed. Everybody knows how the modern huge firms have brought their remedies directly before the public, and the public has been encouraged in their use by doctors approving of their use and prescribing them—thus people can treat each other and themselves; the better education of the modern chemist and nurse too often deprives the doctor of a fee. If, after bringing home or proprietary remedies and consulting a chemist or nurse and the doctor by telephone, the latter at last is called in to see "if the case is serious." Should the case be a serious one needing continuous medical attendance and observation, *e.g.*, pneumonia, enteric fever or appendicitis, a trained nurse, and rightly too, is put in charge, the doctor receives his reports from time to time by the nurse, through the telephone often, and visits as often as he, or perhaps the patient, thinks necessary. The minor details of the treatment, previously his duty, *e.g.*, hypodermic medication, enemata, catheterisation, etc., are performed by the nurse, and to put it practically he visits the patient much less often and receives smaller remuneration than in former times. All this, I repeat, is not an injustice; it is a natural result of modern division of labour in medical treatment—and a good one, too, as it is not too hard on the patient in his misfortune and relieves the doctor of a lot of drudgery and anxiety. The result, however, is a smaller income for the medical man. In other words, with our modern adjuncts in the way of hospitals and nurses, the number of medical men necessarily becomes lessened. We are speaking here of the class of patients who are able to pay ordinary medical fees, and as this class gives the doctor his living it is only one to be dealt with here.

The question is, "What effect will this have?" The chief effect will be a change in the type of practitioner; the typical general practitioner, the doctor, who was able to make a good income from frequent visiting, often perfunctory, quiet little chats, etc., will cease to exist. In this practical age people are too anxious to get well as quickly and cheaply as possible, and we can only confess that this is natural. The doctor will only be sought in serious cases, and he will have to be educated more and more to keep abreast of the times—this at least will be the case in all large cities and towns; it means, in short, that the place where there is any room is "at the top" only, and the incomes derived from general practice by men of medium attainments will become so insignificant that fewer parents will send their children into the medical profession.—I am, etc.,

GENERAL PRACTITIONER.

Sydney.

THE USE OF CROTON OIL IN TYPHOID.

(*To the Editor Australasian Medical Gazette.*)

SIR,—The purpose of this letter is to call attention to certain actions of this drug with a view of raising the question whether it would be preventive in disorders of the intestinal canal generally, and particularly as to whether these actions would make it useful either by itself or following on calomel in aborting typhoid. The action first and foremost of croton oil appears to be to loosen and detach everything, expending itself in the expulsion of any morbid irritant, and it is only when the dose is large enough to effect this in the entire course of the whole bowel, and 1 m. generally is, that evacuations come about with the rapidity associated with the name, purging and vomiting, for instance, at one and the same moment.

I desire to bring forward from my own practice instances in proof of this.

In South Africa a black man purged under calomel, but would not vomit under apomorphine hypodermically. In this case 2 m. of croton oil (a small dose for a black man, who requires more than four times the purging medicine of a white) induced vomiting without purging and 4 m. both vomiting and purging.

The cases following are all white men:—A man with diarrhœa and five evacuations in the last 2½ hours took ⅒ m. of croton oil, and 4 hours later reported no more evacuations, and took another ⅒ m., and shortly afterwards reported a great evacuation, and then a normal condition.

A man with diarrhœa took ¼ m. of croton oil every hour for 6 hours, and then at 9 p.m. went to bed; there was no evacuation till 7 next morning; a week later, when the diarrhœa was cured, he took rather less croton oil, and found evacuations came about rather more quickly. I have never heard of any other purgative medicine requiring larger doses in diarrhœa than in an ordinary condition of the bowels, as in this case, which seems the clearest illustration of the manner in which croton oil expends itself in the expulsion of any morbid irritant.

A baby with diarrhœa took $\frac{1}{30}$ m. with benefit. A man took a minute dose of croton oil, and went to bed, feeling very soon a sensation of movement in his bowels all night; he got up in the morning and walked about for some hours before there were any evacuations. This is one of many instances in which I have noticed a long interval, sometimes a whole day, between a sensation of movement and evacuations, and that so far from being rapid evacuations are extremely slow unless the dose is large enough to enable it to perform what seems to be its first and foremost action—the loosening and detaching of everything in the course of the whole bowel.

The minute doses above mentioned, $\frac{1}{30}$, $\frac{1}{10}$, $\frac{1}{4}$ m. are easily administered by adding a little croton oil to a bottle of castor or olive oil.

An account of the only case of typhoid I have yet had an opportunity of treating on the above plan now follows:—

On Thursday afternoon, December 17, 1903, I was called to a case; temperature 101, pulse 100; pain in back of neck and region of spleen, with decided malaise and fever since the previous Sunday. The diagnosis of typhoid being confirmed by a drop in the temperature next morning to 98·8, I gave two small doses of calomel, which purged him that night. The calomel was given in order that the croton oil might follow with safety. The next morning $\frac{1}{8}$ m. of croton oil, put up in olive oil, was given every hour; after two such doses evacuations came about greater than under the calomel, seeming to show the calomel must have left a good deal behind; he was eating next to nothing at the time. The effect of the croton oil seemed to be to clean out the bowels so as more effectively than calomel alone to expose the surface where the typhoid germs were to the action of the antiseptic, corrosive sublimate, given by the mouth, the administration of which was soon followed by sensations of movement in the bowels, which we thought preceded an evacuation. They continued all Saturday without any evacuation, but on Sunday morning, on waking, they were gone without any evacuation; temperature was normal, so these sensations appear to have been due to a conflict between the corrosive sublimate and the germs, particularly as when temperature was normal, and presumably germs dead, the antiseptic was continued without any such sensations.

It will be observed that croton oil was given on the sixth day; that cure took place in 2½ days.

Its action was gentler, with less pressure, and softer evacuations than the calomel which preceded it. For fear of contradiction on this point the patient follows the unusual course of giving his name for publication: James Malone, a miner of Sir Samuel, below mentioned.

The case appeared to be typical typhoid, but of nearly 200 miners in the camp there was no one who doubted this; and considering how prevalent typhoid has been in the West Australian mining camps, public opinion in such a case ought to be a good judge.

It could not have been one of the bilious feverish attacks common to hot climates, for the man had had several of these.

The only argument against the diagnosis of typhoid would appear to be the rapidity of recovery, but the power of the croton oil seemed to be shown not only in the manner before mentioned, but in entirely dispelling the pain in the neck immediately.—I am, sir, yours faithfully,

WILLIAM ROPER, M.A. (Oxon.),
L.R.C.P., L.R.C.S. (Edin.)

Sir Samuel, West Australia,
Jan. 11, 1904.

PUBLIC HEALTH.

New South Wales.

Health of the Metropolis.—Dr. W. G. Armstrong, the City Health Officer, reports as follows:—The deaths for the month of February, 1904, numbered 432, equivalent to an annual death rate of 10·1 per 1000 of the estimated mean population. Deaths from diarrhœal diseases (diarrhœa, enteritis, dysentery, etc.) numbered 68, a figure which is 52 less than the number of deaths recorded in January, and 13 less than the average number of deaths under the same headings during February of the five preceding years. Doubtless this reduction is very largely due to the low temperatures which were experienced in Sydney during the month. Of the total number of deaths from diarrhœal diseases, 51 occurred in children under one year of age. The number of infantile deaths from all causes during the month was 128, which corresponds to an infantile mortality rate of 130 per 1000 births, and is below the quinquennial average for February. Deaths from the principal zymotic diseases (excluding diarrhœa) numbered 26, of which 12 were due to whooping-cough, five to diphtheria, and nine to typhoid fever. Deaths from phthisis (31), cancer (21), and respiratory diseases (31) are all below the quinquennial average for February. Two deaths were recorded from epidemic cerebro-spinal meningitis. Under other headings the number of deaths recorded show little departure from the average. Attacks of infectious diseases notified during the month were:—Scarlet fever, 87; diphtheria, 54; typhoid fever, 106. There has been more diphtheria than the average for this month in previous years (38 cases), but as regards both scarlet fever and typhoid fever the number of attacks is almost exactly that of the five year average number for February.

The Vital Statistics of the Metropolis for the Year 1903.—During the year 12,749 children were born (6510 males and 6239 females); and 5913 persons died (3124 males and 2789 females). These totals are respectively 373 and 11 greater than the average for the previous five years. The birth-rate is 25·01, and the death-rate 11·60 per thousand of population. The excess of births over deaths was 6836. The record of births is smaller numerically than that of 1902, but with the exception of that year is the highest since 1895. Relatively to population, however, the birth-rate shows a decline, and is the lowest record save one (1900) during the last ten years. The illegitimate births, 1278 in number, formed 10·02 per cent. of the birth list. This rate exhibits a slight increase on the value for 1902 (9·56). but is otherwise the smallest rate during the last five years. The death record is of a satisfactory nature, since, when allowance has been made for the increase in population, the death-rate of 11·60 per 1000 is 0·57 per 1000 below the average of the preceding five years. The infantile death-rate is below the average, being at the rate of 116 per 1000 births, as against 130, the average rate for the last ten years. The deaths of children under 5 years of age comprised 33 per cent. of the death roll, the average rate being 38 per cent., thus presenting the same favourable aspect as in the case of infants. On the other hand, the deaths of persons over 5 years of age numbered 67 per cent. of all deaths, as against the decennial rate of 62 per cent. in this class. Of persons aged 70 and upwards there were 830 deaths. They were of the following ages:—566 ranging from 70-79; 231 from 80-89; 32 from 90-99; and 1 at 107., the marriages, 4771 in number, are numerically above the decennial average. In proportion to population, the rate, 9·36 per 1000 of population, also exceeds the average rate. Zymotic diseases caused 568 deaths, the quinquennial number being 682. Of the constituent diseases of this class there were increases in scarlet fever, 49 (against the quinquennial average of 20); diphtheria, 72 (40); and typhoid fever, 85 (83); and decreases in measles, 6 (66); influenza, 29 (55); whooping-cough, 44 (113); diarrhœal diseases, 162 (164); and puerperal fever, 23 (33). The diminution in deaths from diseases of this class, the absence of any plague cases, and the stationary position of the numbers relating to typhoid fever and diarrhœal diseases show the improved sanitary conditions of the metropolis. In 1903 enteritis caused 617 deaths, mostly of children of tender years, showing an advance of 32 per cent. above the quinquennial rate. Nine hundred and six cases of illness from typhoid and 717 cases of diphtheria were notified during the year, representing increases in the case rates of 34 and 57 per cent. respectively. These numbers, when compared with the mortality from the diseases, give fatality rates of 9⅓ and 10 per cent. respectively. In the constitutional class of diseases there is an advance in each of the great divisions of the class, cancer (377), and phthisis (526), exhibiting numerical increases of 7 and 4 per cent. respectively. Diseases of the nervous system show a reduced rate, the figures (492) for the year being 16 per cent. below the average. Of the diseases showing an increase there are—paralysis, 44 (42); and insanity, 72 (51); whilst amongst the decreasing complaints we find — meningitis, 81 (82); apoplexy, 142 (169); epilepsy, 17 (30); convulsions, 64 (99). Diseases of the circulatory system give an increased rate of 11 per cent. above the average. The main contributing causes were—endocarditis, 162 (154); and syncope, 107 (108.) In the respiratory system a slight decrease is apparent, on the whole. The lowering of the rate is most pronounced in bronchitis, with 198 deaths, the average being 218. Pneumonia, with 379 deaths, is exactly equal to the average. Violence accounted for 345 deaths—an advance of 4 on the quinquennial average. Of these, 220 were the results of accidents, 10 were due to homicide, 75 to suicide, and 3 to execution, whilst no less than 37 were unclassified, the causes of death being doubtful.

Vital Statistics of Newcastle District for the year 1903.—During the year 1834 children were born (937 males and 897 females), and 828 persons died (466 males and 362 females). The birth-rate is 32·18, and the death-rate 14·53 per 1000 of population. The excess of births over deaths was 1006. The record of births is lower than the figures for 1902, by 2·04 per 1000. The illegitimate births formed 6·05 per cent. of the birth list. The deaths numbered 24 less than in the previous year; and, in proportion to population, exhibit a better rate by 0·77 per 1000. The infantile deaths represented a death rate of 120 per 1000 births, as compared with the preceding rate of 155 per 1000, thus showing a considerable improvement in the health conditions of infant life. There has, however, been an advance in the adult mortality from 455, the figures for 1902, to 535, the latest record. Zymotic diseases caused 95 deaths, being 18 less than the figures for 1902. Of these, 18 were due to typhoid, 10 to influenza, 5 to scarlet fever, and 4 to diphtheria; whilst to diarrhœa were attributed 33 deaths, as against 24 previously. Constitutional diseases caused 128 deaths, as compared with 112 for the previous year. The chief complaints in this division were—phthisis, 49; cancer, 36; tabes mesenterica, 17; tubercular meningitis, 11. In the local class of complaints apoplexy caused 37 deaths; endocarditis, 16; bronchitis, 29; pneumonia, 43; dentition, 11; enteritis, 86; Bright's disease, 26. The mortality from enteritis (86) is slightly less than during the previous year; of these, 79 were children. Deaths from violence present a similar aspect to that of the preceding year, the deaths numbering 52 as against 53. Of these, 44 were the result of accident, 5 were due to suicide, and 3 were unclassed. There were no less than 36 deaths from atrophy, or inherent weakness, which were all of young children. According to the returns of the Health Department, there were 265 cases of typhoid and 39 of diphtheria reported during the year, resulting in the deaths of 18 and 4 persons respectively. These figures represent a fatality rate of 6·8 per cent. for typhoid, and 10·3 per cent. for diphtheria, the rates for 1901-2 being for typhoid 9·2 and 4·9 respectively, and for diphtheria 22·6 and 25·8 per cent. The marriages during the year numbered 581.

Smallpox.—On March 1st the Board of Health withdrew the restriction imposed in the case of vessels arriving in Sydney with passengers from Christchurch, Lyttelton, or Wellington. For several days previously no trace whatever of smallpox had been found at any of the places mentioned. This circumstance, together with the knowledge that the New Zealand Health authorities attacked the outbreak in a vigorous manner, decided the Board of Health that all danger of the disease being brought here has passed away for the present.

The Bubonic Plague.—The precautionary measures taken to prevent the plague spreading when that infection made its last appearance here have been continued unceasingly ever since. A staff of seven men is constantly employed by the board in catching rats and mice around the wharfs and foreshores, and also in premises which offer an attractive harbour for such vermin. Each week between 500 and 600 rats and mice are examined in the bacteriological laboratory, but no trace of plague had been found since last August until this month. In one week recently the number of rodents destroyed in the city was 1550 rats and 665 mice. Owing to the reappearance of the bubonic plague in Queensland the Governor has, with the advice of the Executive Council, directed that "all ships or vessels arriving in this State from Brisbane, whether arriving direct or after having called at intermediate ports, or having on board passengers or cargo in transit from such places, and all boats having received any persons or things from such ships or vessels, and all persons, goods, wares, merchandise and other articles coming or brought in, or being on board such vessels or boats, shall in every case be detained in quarantine until they receive pratique from the Port Health Officer." On March 10th it was reported to the Board of Health that a youth, aged 15 years, an errand boy in a Sussex-street produce store, had developed suspicious symptoms of illness. He was examined by the health officers of the Board of Health, when it was seen that the youth was suffering from plague. He was at once removed to the Coast Hospital. A sanitary inspector was sent to inspect his home at Balmain. At the same time the Town Clerk was notified of the occurrence, whilst the medical officer of health of the metropolitan district was instructed to examine the produce store where the boy worked. The President of the Board of Health, Dr. Ashburton Thompson, stated that a mouse found on the Darling Harbour side of the city on March 5 was proved on March 7 to be infected with plague, and that on March 9 plague was identified in a rat captured at a produce store two doors from where the plague patient worked. The point where the mouse was captured is close to the Grafton Wharf. Vessels trading to Queensland berth at the wharf, and a large quantity of produce is handled there. Dr. Thompson is of opinion that the distribution of plague is coincident with the distribution of produce, and the suburbs must be prepared to find that they have been infected in that way. It was to guard against such infection that the model by-laws were recently adopted by the board.

The Milk Supply.—Dr. Ashburton Thompson, president of the Board of Health, states that for the past two and a half years over 300 prosecutions have been instituted, with the result that the practice of putting preservatives in milk is gradually becoming less. All the year round samples of milk are taken by the officers of the board for analysis. The milk vendors are entirely ignorant as to when the samples will be taken; hence they have been, to a large extent, forced to abandon the practice of using preservatives. Whilst 44 per cent. of the samples taken in 1901 were found to be adulterated, next year the percentage dropped to 22, whilst for the first 10 months of 1903 only 4 per cent. of the samples were shown to be adulterated. In the opinion of Dr. Thompson, this remarkable improvement is due to the twofold reason that samples of milk are constantly being taken, and the knowledge gained by milk vendors that there is no necessity whatever to use preservatives in milk. It appears, however, that some descriptions of preserved milk are still adulterated with preservatives, and the board intend to take further action in the matter.

Victoria.

An Epidemic of Typhoid.—Owing to the prevalence of typhoid, all the Melbourne hospitals are crowded with patients, and great difficulty is experienced in finding beds for urgent cases now being brought in. A record has been kept of where each patient has obtained a milk supply, and in several instances four or five customers of particular dairymen have all been infected with the disease.

At the meeting of the health committee of the Malvern Council recently, the sudden appearance of four cases of typhoid in the district was considered. Dr. Norris, acting medical superintendent of the Board of Public Health, however, visited Malvern, and as a result of his inquiries a well-known milkman of the district has been ordered to thoroughly fumigate his dairy before supplying more milk to the public. There is no conclusive evidence that the Malvern cases arise from this source, but several typhoid cases in Prahran have been unmistakably traced to this dairy. The manager has therefore been directed to have several of his sheds burnt down, and the rest disinfected, and other precautions are also to be enforced. A lad employed some time ago by the dairyman to drive his cart was found to be suffering from typhoid fever, and was literally taken from work to the hospital.

Tasmania.

Vital Statistics for the Registration Districts of Hobart and Launceston for the year 1903.—During the year 1584 births were registered in those districts; this shows a decrease of 17 as compared with 1902, and an increase of 110·6 as compared with the average of the births registered in the last five-yearly period. To every 1000 of the population of the two districts the proportion of births registered were for Hobart 27·16, Launceston 29·56 ; for all, 28·08. The deaths registered in Hobart and Launceston numbered 1023. The total number of deaths in the two districts during 1903 is 41 more than last year, and shows an increase of 51·2 as compared with the average number of deaths registered during the five-yearly period. To every 1000 of population of the respective divisions the proportion of deaths registered were as follows: Hobart 18·24, Launceston 17·96; in all, 18·13. The deaths under five years of age numbered 299, or 29·23 per cent., of which 253 were under one year. The deaths between five and 65 years of age numbered 384, or 37·54 per cent.; and the deaths 65 years and upwards 340, or 33·13 per cent. The chief causes of deaths were: General diseases—Hobart 210, or 33·02 per cent.; Launceston 142, or 36·69 per cent. Local diseases—Hobart 252, Launceston 169. Principal specific causes—Smallpox 88, Launceston; whooping cough, 103 for the two districts; typhoid, etc., 60; diarrhœa and dysentery, 103; cancer, 154; phthisis, 156; premature birth, 130; old age, 520; heart disease, 305; enteritis, 182. The above numbers of principal specific causes, with the exception of smallpox, are for the two districts taken together.

New Zealand.

Vital Statistics of the Four Chief Towns for year 1903.—The total number of births registered in the four chief centres and suburbs in 1903 was 5812, as against 5347 for the previous year, varying from 30·09 in Auckland to 22·79 in Dunedin per 1,000 of mean population. The total number of deaths registered for the four centres and suburbs in 1903 was 2524, varying from 10·98 to 12·97. Including the suburbs the rate for the year 1902 is lowered at each of the four centres. Excluding the number of deaths of infants under one year, the mortality is found to have been—Auckland: 1902, 11·10, 1903, 8·57; Wellington: 1902, 8·87, 1903, 8·27; Christchurch: 1902, 9·04, 1903, 8·60; Dunedin: 1902, 11·11, 1903, 11·11. The chief causes of death were—Zymotic diseases, 256, or 10·14 per cent. for the year 1903, and 356 for 1902 (diarrhœal diseases 78, scarlet fever 50, whooping cough 29, measles 28, typhoid fever 16, influenza 15, diphtheria 5, and other zymotic complaints 35). Dietetic diseases 34, or 1·35 (want of breast milk 7, alcoholism 26, exposure 1). Constitutional diseases 488, or 19·34 (tubercle 250). The mortality from tubercular diseases for 1903 is 9·90 per cent. of the total deaths at the four boroughs and their suburbs from all causes (cancer 179, or 7·09 per cent. of the deaths from all causes). Diabetes 25. Developmental diseases 258, or 10·22 per cent (premature birth 87, old age 151, and 20 from other causes). Local diseases 1267, or 50·20 per cent. (disease of the nervous system 2·95). Diseases of the respiratory system 275. Diseases of the digestive system 258 (enteritis 95), the circulation system 258).

South Australia.

Kensington and Norwood Local Board of Health.—Dr. T. Borthwick, the Health Officer, reports as follows for the year ending September 30th, 1903:—*Population:* The population is 12,566. *Births and Deaths:* There were registered during the year ending September 251 births and 148 deaths, giving a natural increase of 103, as compared with 163 for the preceding 12 months. The birth rate and death rate are thus respectively 19·74 and 11·64 per 1000. *Infant Mortality:* Of the 148 deaths registered, 39 were under one year of age. This represents a mortality of 15·5 per 100 births, which is higher than in any year for the last five years. *Cause of Death:* The following were the cause of deaths during the year: —Measles, 1; scarlet fever, 1; diphtheria, nil; whooping cough, 1; enteric fever, 1; diarrhœa and dysentery, 6; diseases of respiratory system, 13; phthisis, 11; diseases of circulatory system, 22. *Infectious Diseases:* There were reported during the year 13 cases of enteric fever, 99 of scarlet fever, 9 of diphtheria, 2 of erysipelas, 1 of puerperal fever, and 32 of pulmonary tuberculosis. *General Remarks:* The sanitary condition of the town has been maintained by the usual inspection and attention to insanitary conditions.

The Health of Adelaide.

Abstract of the Annual Report of Dr. T. Borthwick, the Medical Officer of Health.

POPULATION.—This was estimated by the Registrar-General to be 39,485 on the 1st January, 1903. On the corresponding date of last year it was estimated to be 39,345, thus giving an increase of 140 for these 12 months.

BIRTHS AND DEATHS.—There were registered during the year ending 30th Sept., 880 births and 841 deaths. The birth-rate and death-rate per thousand are thus 22·28 and 21·29 respectively. Excluding the deaths in public institutions of persons not usually resident in the city, the number of deaths is reduced to 642, and the death-rate is represented by 16·95. Of the 642 deaths, 127 were under 1 year of age, giving an infant mortality of 14·4 per 100 births; and there is continued progressive decline of the birth-rate; also a decrease of the total death-rate, which is the lowest for the last five years, and of the infant mortality compared with last year.

TYPHOID.—One hundred and seventy-two cases were reported, of which 118 were imported from outside districts, and 54 cases apparently had their origin in the city. Eight of these derived infection from pre-existing cases in the houses; one was contracted in a hospital. It was impossible to trace the origin of the remaining 46 cases. The only coincidences common to all of them were the sewer system, the water supply, the dust-laden atmosphere, and insects. There was no reason to suspect the sewer system except in one case. The water supply of the city comes chiefly from Happy Valley and Hope Valley reservoirs, and it is well known that the watersheds are largely populated. An enquiry held on this matter showed that there was room for improvement in the supervision of the sanitation of the sheds. In regard to the dust-laden atmosphere, if the dust contains typhoid bacilli, it may be the cause of outbreaks of typhoid fever. It thus becomes an important matter to minimise the dust nuisance. The influence of flies as carriers of infective matter is probably considerable, and steps should be taken to exclude them from houses as far as possible. Seven deaths from this disease were registered during the twelve months.

DIPHTHERIA.—One hundred and twelve cases were reported, of which 55 were imported, and 57 were apparently of local origin. Three of these undoubtedly were infected from the first patient in the house, whose illness was unrecognised for some time. Five were contracted in a hospital. The remaining 49 cases were not traced to any special source. Four deaths were registered during the twelve months.

SCARLET FEVER.—This disease has been extremely prevalent throughout the year. The outbreak commenced at the end of last year, increased gradually in extent, and is now rapidly declining. Three hundred and two cases were reported, of which 68 were imported from outside districts for isolation in hospital, and 234 were apparently of local origin. The disease was apparently introduced from one of the suburbs, and its spread through the influence of schools was very apparent. No deaths were registered during the twelve months.

MEASLES.—The solitary case of this disease was a relic of last year's outbreak.

ERYSIPELAS.—Thirty-two cases were reported, of which 7 were imported for hospital isolation and treatment. The 25 cases of apparently local origin were not markedly associated with insanitary conditions.

PUERPERAL SEPTICÆMIA.—Nine cases were reported, of which 5 were imported for hospital isolation and treatment.

PULMONARY TUBERCULOSIS.—One hundred and twenty-four cases were reported during the year, of which 42 were imported for hospital treatment, and 82 were apparently of local origin, giving a rate of 2·07 per 1,000. Sixty-seven deaths were registered during the year, giving a mortality of 1·69 per 1000. A large number of the houses in which this disease occurred were insanitary; the conditions noted being want of ventilation and want of light in rooms, dampness of walls, and dirty walls and ceilings. Some progress has been made during the year in the crusade against consumption. As a result of a conference of delegates from Local Boards of Health, it was resolved that Local Boards should contribute £600 a year towards the funds of the James Brown Trust, which in return agreed to provide at least 12 beds at Kalyra for the treatment of poor patients in the early stages of the disease. By this arrangement, it is hoped that about 50 patients will be benefited during the year. In addition to this, there is the already existing sanatoria for patients able to pay, and the Government has promised to make provision for the isolation and treatment of poor patients in the advanced stages. A local branch of the National Association for the prevention of consumption has also been formed, and its educational effect on the people must in time be considerable.

GENERAL.—The city trained nurse has made 3,324 visits during the year to 516 patients, and has assisted at or supervised the final disinfection of 415 houses. To efficiently carry out disinfection, a steam disinfector is urgently required. I may here acknowledge the sympathetic co-operation of the medical profession in facilitating the operation of the sections of the Health Act which relate to infectious diseases.

INSANITARY HOUSES.—During the year 45 houses were condemned as unfit for human habitation, of which five were ordered to be taken down, while the remainder were placed in a satisfactory condition. Over 2000 notices were served to cleanse, ventilate, or repair other houses.

REFUSE DISPOSAL.—The disposal of refuse removed from private premises continues to be by means of "tips" in various parts of the park lands. These are dealt with in a systematic manner under the supervision of the city surveyor, and the refuse is thoroughly covered every day with earth. The picking of rags, etc., at the tips has been prohibited, and steps are taken to destroy all rats at the tips. A destructor forms an essential part of the modern sanitary equipment of a city; but while a destructor is under consideration, it would be a great advantage to the public health to provide properly constructed carts for the removal of house refuse.

SPITTING IN THE STREET.—The by-law prohibiting spitting on the footpath is now in force, and it is gratifying to report that this objectionable and dangerous practice has been to a considerable extent checked.

LAVATORY ACCOMMODATION.—In this respect Adelaide is decidedly behind the times, and it is imperative for the Board to take into its early consideration the provision of public conveniences for both men and women.

Leprosy in New South Wales.

REPORT BY DR. ASHBURTON THOMPSON FOR THE YEAR 1901.

ON 1st January, 1901, 11 persons remained under detention at the lazaret. During the year 10 persons were reported to the board under the Leprosy Act, 1890, as being suspected lepers, and of these nine were ultimately admitted to the lazaret under warrants which were issued by the board after careful inquiry into each case. Five patients died during the year; two were natives of New South Wales of European descent; one a native of Fiji of European descent; one a native of Tanna (New Hebrides); and one a female Chinese. Thus the number remaining in the lazaret on 31st December, 1901, was 15 persons; nine were whites, five of whom were natives of New South Wales of European descent, one was a native of Germany, two were natives of England, and one was a native of the United States of America. Of the coloured lepers one was a Javanese, four were natives of China, and one a native of Aoba Island, New Hebrides. The total number of persons admitted since 1883, when patients first began to be received (though the notification of leprosy was first made compulsory, and the detention of lepers provided for by law only towards the end of 1890), is 78. Distributed under nationalities, the account stands as follows:—Natives of New South Wales, 21, of whom 15 have died and one was released; of Queensland, one, deceased; of England, four, of whom two have died; of Ireland, two, deceased; of New Zealand, one, deceased; of Fiji, one, deceased; of Germany, two, of whom one has died; of Belgium, one, deceased; of the United States of America, one; and all of these were whites, of European descent. There were also 37 natives of China, of whom 12 have died, and 21 have been returned to their own country; of India, two, deceased; of the West Indies, one, discharged in 1885; of Java, one; of Tanna (New Hebrides), one, deceased; of New Caledonia, one, deceased; of South Sea Islands, one; and all of these were coloured people.

Every opportunity has been given to members of the medical profession to visit the lazaret for the purpose of seeing such patients as were formerly under their care, and for study of the disease.

The expense of maintenance equals an average of £142 11s 10d per inmate per annum.

The needs of the patients have been carefully supplied by experienced attendants and nurses, under the direct supervision of the medical superintendent and the matron of the Coast Hospital, and every means has been, as in the past, adopted to alleviate their sufferings and to mitigate the hardships of their detention.

In an appendix to the report full notes are given of the new cases admitted during the year.

Medico-Ethical and Medico-Legal.

A Lunacy appeal, McLaughlin v. Fosbery and others.—This appeal was heard in the Sydney Banco Court, and was an appeal by John McLaughlin from an order made in Lunacy jurisdiction by the Chief Judge in Equity, dated December 3rd last. It appeared that on the 29th October last appellant brought a common law action against Edmund Fosbery (late Inspector-General of Police) and John Fullerton, Edward George Ward, and James McBride, members of the police force, to recover £25,000 damages for their alleged illegal action in taking him from his own house to Bay View against his will, and causing him to be detained as an insane person at Bay View. Subsequently defendants applied under section 172 (sub-section 3) for a stay of proceedings in the action, on the ground that they were within the protection of section 172 (sub-section 1 and 2) which provided that no action should lie against any person who has acted in good faith and with reasonable care in carrying out the provisions of the Act, or where such action has not been commenced within three months after the alleged cause of action. His Honor the Chief Judge in Equity, in the course of his judgement, said: "It was contended by Mr. Pilcher that section 16 of the Lunacy Act gave no power to take any person who had been found to be insane to a hospital or licensed house against his will, and that if Mr. McLaughlin refused to go to Bay View, the only course was to take proceedings under sections 4, 6, or 9. I am unable to agree with this view. Those sections apply to persons believed to be insane, who have not been so declared. Section 16 applies to persons who have been found insane, and provides that an order signed by a Judge or by the committee appointed by the Court 'shall be sufficient authority for the reception of such person into any hospital for the insane or licensed house without any further or any such medical certificates as hereinbefore mentioned.' Section 16 does not in terms provide for taking an insane person to a hospital or a licensed house, but such power is, in my opinion, necessarily implied from the provisions which authorise his reception into such institution, his detention there, and his recapture if he escapes. I think that section 172, sub-section 1, is a good defence to the action. Sub-section 2 is also an answer, for Mr. McLaughlin obtained the superseding order on March 10, 1903, and this action was not brought till October 29. For these reasons I must make an order staying the proceedings in the common law action, as asked, with costs." McLaughlin now appealed against this order, on the grounds that his Honor was in error in the dicision arrived at, that his Honor should not have held that there was no reasonable ground shown by the plaintiff for alleging want of good faith or reasonable care on the part of defendants, and that his Honor should not have held that an authority given by the committee of the person of the plaintiff to Dr. Vause, the superintendent of a licensed house, being an authority to the said Dr. Vause to receive plaintiff in the said licensed house, necessarily implied and carried with it an authority to the defendants to commit the acts complained of. Mr. Justice Owen (Mr. Justice Walker and Mr. Justice Pring concurring) said that a very large portion of the argument by the appellant was addressed to matters which the Full Court dealt with on the last Equity appeals or the appeals immediately before, and the facts were gone into very fully at that time. It must be taken that although there was an appeal to the Privy Council from the opinion of the Court, the order declaring Mr. McLaughlin of unsound mind on a certain date was a perfectly valid order, and that the subseqnent order appointing a committee of the person and estate was also perfectly valid. It might be that the Privy Council, after hearing the appeal, might take a different view, but until they expressed that view the decision of the Court must be taken as the law of the State. To his mind, it was perfectly clear that this was an action contemplated by sub-section 1 of section 172 of the Lunacy Act, and that it had not been brought within three months after the alleged cause of action, as provided in sub-section 2. Then sub-section 3 of the same section provided that proceedings in such an action might, on summary application to the Court, be stayed if the Court was satisfied that there was no reasonable ground for alleging want of good faith or reasonable care, or that the proceedings had been commenced after the expiration of the three months from the alleged cause of action. The Legislature therefore had given to the Court of Lunacy jurisdiction to deal with matters of this kind on summary application, and, if it saw fit, to stay proceedings in the action. It was therefore not necessary to go before a Common Law Judge. Then, turning to section 16 of the Act, it was provided that where the Court had made an order declaring a person insane, an order by a Judge, or by the committee appointed by the Court, was sufficient justification to any person in authority in hospitals for insane or licensed houses to receive the patient into his care. Mr. McLaughlin, however, argued that it did not apply to the action of the police in bringing him to the licensed house; but he (his Honor) was quite clear that if the police were acting bona fide and exercised due care they were entitled when an order was placed in their hands or shown to them declaring a person insane, to remove him to a hospital for insane. The only other question was whether there was due care and bona fides on the part of the police, and he was of opinion that there was. The appeal was dismissed with costs.

An Unregistered Practitioner.—Alfred S. L. Rellim was this month convicted at Launceston (Tas.) for practising as a physician without being registered. He exhibited a brass plate at his residence, which was called "The Rellim Institute—Advice gratis." It was proved that he gave medicine, consisting principally of eggs and lemons, for which he charged £1. He was fined £20, or three months. Rellim was also sentenced to two months' imprisonment for passing a valueless cheque.

UNIVERSITY INTELLIGENCE.

University of Sydney.—At the last monthly meeting of the University Senate held, a letter was received from Mr. A. C. Nathan, D.D.S., resigning his lectureship in dentistry, in consequence of ill-health. The resignation was accepted with regret. On the recommendation of Professor Wilson, Dr. Gordon Craig was appointed an honorary demonstrator in anatomy for the year 1904. An invitation was received from the University of Wisconsin, inviting the University to be represented at its jubilee celebrations, to be held in June, 1904. The question of representation of the University was left in the hands of the Chancellor, and Professor MacCallum was requested to prepare an address of congratulation. The following degrees were conferred in absentia:—Master of Surgery, R. S. Goodsall, Constance E. D'Arcy.

Melbourne University.—At a meeting of the council of the University of Melbourne held this month the Vice-Chancellor, Sir Henry Wrixon, being in the chair, a report on the bacteriological work done in the University laboratories for 1903 was read. It showed that 2246 examinations were made for the Board of Health, chiefly in connection with the diagnosis of typhoid, tubercle, diphtheria, hydatids, actinomycosis and septic conditions. The "typhoid reaction" had again proved very useful in determining between typhoid and analogous clinical conditions. It was stated that from the study of a great number of cases it would seem that there was some relationship between intensity of the "blood reaction" and tissue resistance on the part of the patient. Specimens from 101 animals were examined in connection with outbreaks of disease amongst stock, and important work was done in demonstrating the presence of swine fever in Victoria. In connection with the City Council a six months' daily examination (exclusive of Sundays) of tap water from the Melbourne Town Hall was made. The results obtained indicated a relationship between the rainfall and the numbers of micro-organisms in the water supply. Work had also been done for the shire councils, the Board of Works, and other public institutions, in addition to the ordinary teaching, and original research in such subjects as pleuro-pneumonia, calf vaccine, anthrax and septicæmia.

HOSPITAL INTELLIGENCE.

Royal Prince Alfred Hospital, Sydney.—The monthly meeting of the board of directors of the Royal Prince Alfred Hospital was held last month. The report on the work of the institution for the month of January showed that 265 patients had been admitted, of whom 45 were accident and non-paying cases, 147 were Government order patients, and 73 contributed to the cost of their maintenance. During the month 191 patients were discharged cured, 42 relieved, and 14 unrelieved, while 25 patients died. There remained in the hospital at the end of the month 210 patients, the average number of beds occupied having been 229. The number of operations performed was 147. Letters were received from Dr. G. T. Hankins (who had gone on a visit to Europe) and Dr. John Hay (who has been in serious ill-health), resigning their positions as directors. The resignations were accepted with regret, and it was resolved to ask Dr. F. Antill Pockley and Mr. J. P. Macarthur to fill the vacancies. It was also resolved to appoint Messrs. Gotthelf and W. Trotter to seats on the house committee, rendered vacant by the resignation of Drs. Hankins and Hay. A letter was received from Lord Jersey, who had been acting as Agent-General, intimating that a committee of selection had been appointed in London to co-operate with the chairman of the hospital in the appointment of a new matron.

Sydney Hospital.—At the monthly meeting of the board of directors communications were received from the Hon. F. B. Suttor, M.L.C., Messrs. W. H. Flavelle, and G. N. Griffiths, and the Hon. R. J. Black, M.L.C., accepting office as directors. Notification of a legacy of £100, left by the late Mrs. Jane Davy, was received. Applications for reappointment to their previous positions on the honorary medical staff were received from the following gentlemen, viz.: Drs. Chisholm, Jamieson, Murray Will, Hamilton Marshall, Newmarch, Marks, Pope, and Mr. P. B. Reading. These gentlemen were reappointed for a further statutory period of four years. Leave of absence for a period of nine months was granted to Miss Creal, matron, to enable her to visit Europe and America, and Senior Sister Powell was appointed as acting matron during Miss Creal's absence.

Carrington Convalescents' Hospital, Sydney.—At the annual meeting of subscribers to the Carrington Centennial Hospital Home for Convalescents, the annual report for 1903 showed that the total number of available beds in the hospital was 103, including seven in the Masonic cottage. The following were the abbreviated statistics for the year:—Remaining in the hospital, December, 31, 1902, 84; admitted during 1903, 1214; total under treatment during 1903, 1298. Of these, 1129 fully recovered their health, 62 were much improved in health, 13 were apparently not benefited, 2 died, and 92 remained in the hospital on December 31, 1903. The daily average number of patients during the year was 90, the highest number on record. The average cost of each occupied bed during the year was £38 6s 10d. The cost of each patient throughout the year, with an average residence of 27 days, was £2 13s 2d. These statistics showed a considerable increase of work over the preceding year, and, notwithstanding the great advance in the prices of provisions and other supplies, the increase in the cost per occupied bed for the year was only £1 10s 1d. Notwithstanding the great amount of benefit that the home afforded to the most deserving class in the community, its distance from Sydney brought it less immediately and prominently before the public than the metropolitan hospitals. All patients had been admitted without reference to their religious persuasion or condition of life, and had been asked to contribute towards the hospital if they could afford to do so. Their contributions amounted to £69 3s 3d, against a total expenditure of £3450. Of the remaining 1252 patients, 627 did not contribute, and 625 were admitted on Government orders. The directors recorded with great regret the loss of their esteemed colleague, the late Dr. F. Norton Manning, whose valuable experience and courteous counsel in the management of the hospital were highly valued by his fellow members. The vacancy on the board was filled by the appointment of Dr. G. E. Rennie. The warm thanks of the subscribers were due to the honorary admitting medical officers and other medical officers. The matron had conducted the hospital with self-devotion, energy and efficiency, and the nursing staff had satisfactorily performed their duties. The committee acknowledged with gratitude the receipt of the following special sum towards the funds of the hospital:—The Hospital Saturday Fund, £200; the trustees under the will of the late Mr. Charles Frith (legacy), £150; under the will of the late Mrs. Sophia Comrie, of Kurrajong, the sum of £96 7s 8d has been invested by the Perpetual Trustee Company, Limited, the interest arising therefrom to perpetuate an annual subscription; the Masonic body of New South Wales, £75 12s; the New South Wales Railway and Tramways Employees' Convalescent Hospital Fund, £27 14s; the Ministering Children's League, cot endowment, £15: J. O. Fairfax, Esq., for the endowment of a bed for one year, £35; T. F. Knox, Esq., towards payment of horses for the ambulance, £14 5s; collections made on board White Star steamers, per Messrs. Dalgety & Co., Limited, £9 10s. The election of six members of committee resulted as follows:—Sir James R. Fairfax and Mr. E. R. Deas-Thomson (nominatod by the Governor), Dr. G. E. Rennie and Mr. T. C. J. Foster (nominated by the donors' representative, Mr. W. Lake), Messrs. T. F. Knox and W. H. Anderson (elected by subscribers.)

Coast Hospital, Little Bay, N.S.W.—According to the last return furnished by Dr. Ashburton Thompson, president of the Board of Health, there were 103 infectious cases in the Coast Hospital, in addition to ordinary cases of sickness. The patients included 51 suffering from scarlet fever, and 13 from erysipelas. The Coast Hospital is the only institution in the metropolis now which treats scarlet fever, erysipelas, and diphtheria cases. Patients dangerously ill with diphtheria are first treated at the metropolitan hospitals, and are then removed to the Little Bay Hospital. During the month of February 303 patients were admitted to the Coast Hospital. Of the number, 219 were general cases, and 90 were suffering from infectious diseases. The number discharged was 263, of which 229 were cured, 56 relieved, and 4 unrelieved; 13 died. There remained in the hospital at the end of the month 301 patients. Of these, 198 were general cases and 103 infectious, consisting of scarlet fever, 47; enteric fever, 32; erysipelas, 11; and diphtheria, 13.

Queen Victoria Home for Consumptives, N.S.W.—At the annual monthly meeting of the House Committee of the Queen Victoria Sanatorium and the Home for Consumptives at Thirlmere, the Medical Superintendent's report at the Wentworth Falls Sanatorium, N.S.W., showed that during the past month five patients had been discharged. Of those, one was improved, one unimproved, and three had the disease completely arrested. The matron's report (Thirlmere) showed that there were 40 patients in the home. During the month 8 had been admitted and 8 had been discharged. With the exception of 3 men, the majority of patients were progressing favourably.

The Benevolent Society of N.S.W.—At the last monthly meeting of the board of directors of the Benevolent Society of New South Wales authority was granted to affix the seal of the society to the contract for the erection of the new buildings in connection with the society's Hospital for Women, Paddington, the initial wing and operating theatre of which are to cost over £22,000. A report was received of the progress of the Hospital for Infants and Asylum for Destitute Women, which is nearing completion on the new site at Ultimo, and the matter of its early opening was discussed. A report of the director of asylums and boarding-out officer relative to the Government patients and the maintenance of the society's inmates was received from the Under-Secretary, and a reply in terms approved by the board was directed to be sent.

The Austin Hospital, Melbourne.—Some difference of opinion exists between Mr. Bent and the committee of the Austin Hospital for Incurables over the proposed erection of the Kronheimer ward for incurable consumptives. Mr. Bent contends that the financial position of the hospital does not justify the committee in extending its accommodation, and that as soon as there is room for 60 additional beds in the new ward there will be a request for an extra grant of £1500 from the Government. It was pointed out on behalf of the committee that a distinct stipulation was made by Mr. Kronheimer that no patients should be received in the new ward until the committee had funds for their maintenance. The last balance showed that the total amount expended for maintenance was £4278, while the receipts totalled £4410. Mr. Bent replied that the committee would be wanting another £1500, and he certainly would not give it to them. He was informed that the Austin Hospital was obsolete in construction, and he did not feel justified in giving State money to an institution which was out of date. Dr. Moore said the Austin Hospital served its purpose just as well almost as if it were a new hospital. Mr. Bent said he did not feel disposed to assist the committee with any grant for maintenance. The State was prepared to provide for the maintenance of incurable consumptives, and could do it better than the committee. Mr. Bent proposes to visit Heidelberg and go over the hospital.

Victoria Sanatoria for Consumptives.—A meeting of contributors to the Victorian Sanatoria for Consumptives, which has been incorporated under the Hospitals and Charities Act, 1890, was held at the Melbourne Town Hall recently, with the object of adopting by-laws and appointing the various staffs for the management of the sanatoria. The objects of the institution were stated to be "the prevention and cure of tuberculosis (a) by treating persons who are labouring under such an incipient form of disease as to afford a reasonable hope of their obtaining benefit from a temporary residence in a suitable climate; (b) by treating persons who, being convalescent, require further medical treatment and change of air to re-establish their health; (c) by treating persons who may be in such other conditions as the institution in any general meeting may consider it advisable to treat, and (d) by such wider or other means as the institution may think fit to adopt. By-law 17, as drafted, provided that the committee should, *inter alia*, "appoint and dismiss medical and other officers, whether honorary or otherwise." Dr. D. Turner moved an amendment, providing that the honorary medical staff might be appointed by subscribers.

The right, he considered, should be conceded to the subscribers, who were fully entitled to it. The amendment was rejected. Office-bearers were appointed as follow:—President: T. H. Payne. Vice-president: Dr. Gresswell. Hon. treasurer: Mr. P. Oakden. Committee: Lady Madden, Mrs. McWalter, Mrs. Simpson, Mrs. Beale, Mrs. Craven, Miss Westgarth, Revs. A. R. Edgar, J. A. Ewan and J. F. Macrae, Drs. D. Turner, R. H. Strong, H. O. Cowen and Norris, Messrs. J. G. Melvin, A. G. Outhwaite, G. Walker and T. Prout-Webb. Honorary medical officers:—Consulting physician: Dr. D. Turner. Medical examiners: Melbourne—Drs. S. Bird, R. H. Strong and D. Turner; Echuca—Dr. R. Bindon Stoney; Eaglehawk—Dr. B. S. Cowen; Bendigo—Dr. Burke Gaffney; Warrnambool—Dr. McKnight.

Wairau Hospital, New Zealand.—A deputation recently waited on Mr. Seddon, Premier of New Zealand, to discuss the present unsatisfactory condition of the Wairau Hospital. Erected twenty years ago, it was now a ramshackle building, which had been twice condemned by the Inspector-General as utterly unsuited for its purpose, and was infested with vermin, despite all efforts to exterminate them. Recently the Hospital Board had spent £50 in trying to drive out the vermin, but in vain. The only remedy was to build a new hospital, but the board had not the money to do it. The Premier said he was quite prepared, in the circumstances, to anticipate the will of Parliament, and submit proposals to the Cabinet to help to get a new building erected.

Diphtheria Hospital at the Glebe.—The question of the removal of the diphtheria branch of the Children's Hospital from the Glebe was brought under notice at the local council at a meeting on March 7th. The Mayor agreed to have a letter written to the Board of Health requesting that when the patients were all transferred the present building should be burnt. A serious danger would arise, it was mantained, if the building were pulled down and the materials used in other structures. The American system of destroying the buildings in which similar diseases were treated, by fire every five years (the buildings being of weatherboard), had proved effective in destroying the germs of the complaint.

MEDICAL NOTES.

Charitable Donations and Bequests.—Lady Cooper, widow of the late Sir Daniel Cooper, has sent a cheque for £1000 to permanently endow a bed in one of the Queen Victoria Homes for Consumptives in New South Wales. Lady Cooper wishes this gift to be a permanent memorial of the late Sir Daniel Cooper, and also wishes that an inscription to that effect be placed over the bed.—A cheque for £100 from the estate of the late Mr. George Kemp, and a cheque from Mrs. William White to defray expenses of another open-air shelter, to be named the William White Shelter, in memory of her husband. has also been received by the committee of these homes.—Mrs. MacCabe, senr., has expressed the desire to erect a ward at the Wollongong Hospital at a cost of £250 in memory of her son, Major MacCabe.—The building committee of the new Sydney Children's Hospital have received a promise of £5000 towards the building fund from Mr. G. F. Todman.—Among the donations received recently by the Melbourne Women's Hospital committee was a sum of £30 7s donated by "a working man," who desired that his name should not be published.

A Veterinary Pathological Laboratory.—One of the most important features of the work carried out in the Stock and Brands Branch relates to investigations made by Mr. J. M. Stewart, New South Wales Government Veterinary Surgeon, of diseases in stock. Almost daily specimens of diseased animals are received from various stock inspectors and stockowners, who are desirous of knowing the nature of the disease from which the animals died, together with the best treatment to be adopted in cases of disease. This necessitates pathological examinations being made of the specimens, with the object of diagnosing the disease. The Minister for Agriculture has recognised the great importance of placing the Government Veterinary Surgeon in a position of being able to give stock inspectors and stockowners the fullest information and advice on the subject of cattle diseases. To that end he has placed a small sum of money at the disposal of Mr. Stewart to provide the nucleus of a pathological laboratory, which may be extended as the growing importance of the sheep and cattle breeding industry demands.

Prevention of Consumption.—At the opening of a fête at Ashfield a few days ago, in aid of the Queen Victoria Consumptives' Homes, Alderman C. Websdale said that he feared the philanthropic people who gave their financial help towards the establishment of homes and sanatoria for the cure of consumption were beginning at the wrong end. The first step, he considered, should be the passing of legislation that would prevent the arrival of consumptives in the Commonwealth. He strongly recommended this phase of the question to the legislators of the various States. The work would never end or be overtaken if checks upon the introduction of consumption were not carried into effect. Alderman Websdale said that no less than six consumptives were landed from one vessel in New South Wales in one week.

Value of Child Study.—At the rooms of the Royal Society, Sydney, Dr. Brennand recently delivered a lecture entitled "Racial Development." He showed that, apart from a mere abstract scientific value, the accurate and systematic collection of information regarding the physical characteristics and condition of the generation growing up would be of great value to the administration of the present or any future Governments, or to sociolgists. He also showed how valuable systematic anthropometrical examinations were to the student of mankind in the mass; how light had been thrown on many obscure questions of racial origins and dissemination, on the doctrine, also of the specific unity of mankind, in spite of infinite variety in the various races. Whilst the saying that "the child was father to the man" was true, so also was the converse of that saying true, and there was no doubt that a careful study of the growth and development of the child had thrown a great light on the constitution of the adult family, the tribe, and the nation.

Women's Progressive Association.—It is reported that the council of the Women's Progressive Association has passed a vote of appreciation and thanks to the board of management of the Balmain Friendly Societies' Dispensary for its action in appointing a woman doctor as one of its medical staff; and a vote of congratulation to Dr. Ellen Wood on her appointment and her spirited action in accepting the position, despite the ostracism of the British Medical Association.

Railway Hospital Fund.—The fourteenth annual meeting of the New South Wales Railway and Tramway Employees' Hospital and Convalescent Funds was held last month at the Railway Institute. The annual report showed a slight falling off of the year's receipts as compared with the previous period. When it was considered that the Commissioners' annual report on the railways and tramways to June 30th, 1903, exhibited a considerable reduction in the number of the staff employed as compared with that of 1902, it fully explained the situation and accounted for 200 members, or the £20 which represented the shortage. This was considered to be most satisfactory in view of the surrounding circumstances. For many consecutive years large increases in funds and members had been consistently recorded. The committee fully believed that the increased activity and natural expansion of the railways together with continuous growth of the tramways would show record years in the fund's future history. During the year the following hospitals were added to the list of institutions supported by the funds, viz., Manly and Windsor Hospitals, and Wentworth Falls Consumptive Home. The New South Wales Civil Ambulance and Transport Brigade has also received a donation in aid of the brigade funds. The adoption of the report was agreed to after a protracted debate having reference to a paragraph dealing with the question of admission to the hospital of subscribers who were able to pay for medical attendance.

Sydney Quarantine Station.—The Lord Mayor of Sydney and the president of the Chamber of Commerce, who are *ex-officio* members of the Public Health Board, together with the other members of the board, Dr. Ashburton Thompson (president), Dr. Mackellar, Mr. E. Fosbery, Dr. Foreman, Mr. W. B. Sharp, and Mr. A. F. Robinson, recently paid an official visit to the Sydney Quarantine Station. The station was found to be in excellent order. Accommodation is provided at the station for 700 persons. The board expressed their appreciation of the arrangements made for the comfort of people who, though quite well, have to go into quarantine when they come from infected places.

Sydney Ambulance Corps.—At St. James' Hall, Sydney, on March 10th, a well-attended special meeting of members of the Civil Ambulance and Transport Brigade and St. John's Ambulance Association was held for the purpose of considering whether the two organisations should amalgamate. The chair was occupied by Sir James Graham, whilst several prominent officials of the two societies were seated on the stage. A resolution was moved—"That the Civil Ambulance and Transport Brigade should amalgamate with and become a corps of the St. John Ambulance Brigade, under the name of the Civil Ambulance and Transport Corps of the St. John Ambulance Brigade, so soon as such amalgamation shall receive the assent of the commissioner of the brigade." This was, after considerable discussion, carried by a large majority. It was moved—"That the committee elected at the forthcoming annual meeting of the Civil Ambulance and Transport Brigade be the first finance committee of the corps, and that such committee and the trustees be empowered to take all such steps as may be necessary to complete the amalgamation." This motion was carried without discussion, and the meeting proceeded to discuss the rules of the new corps.

Colonial Medical Officers for the Navy.—The Defence Department has received, through the Admiral, a despatch from Sir Evan MacGregor, Secretary to the Admiralty, relating to the entry into the Royal Navy of medical men who have qualified at colonial universities. It states that the Lords of the Admiralty have decided to allot a certain number of commissions as medical officers to qualified candidates in the Australasian colonies as follows:—During the next three years Australia will be offered two commissions per year, and New Zealand one in alernate years, making six for Australia and two for New Zealand. During that period the candidates are to be selected by the Governor-General of the Commonwealth and the Governor of New Zealand respectively, after consulting with the Commander-in-Chief on the Australian station, on the recommendation of the university authorities. They must be registered medical practitioners, and hold suitable certificates in both medicine and surgery from the Universities of Sydney, Melbourne, or Adelaide, or the University of New Zealand. They may be either nominated direct, or selected after physical examination held by the local university, according as the Governor or Admiral on the station may determine. They must also pass the physical examination referred to in the naval regulations. Their selection is to be provisional only, their commissions in the Royal Navy being determined by the result of a course of training, in which they will be expected to qualify to the satisfaction of the naval medical authorities.

Diphtheria Patients.—An impression appears to prevail amongst the members of the medical profession in Sydney, that the Coast Hospital is the only establishment at which diphtheria patients are received. The result has been that patients have been sent to the Coast Hospital in such a condition that the journey has endangered their lives. The authorities of the Board of Health explain that, although the Glebe Hospital for Children has been closed against diphtheria patients, except most urgent cases, which will receive immediate treatment, and that arrangements have been made to treat all diphtheria patients at the Coast Hospital, nevertheless dangerous cases will be received at the different metropolitan hospitals. They will be treated until it is safe to remove them to the Coast Hospital.

Deaths under Chloroform at the Melbourne Hospital.—Death under chloroform at the Melbourne Hospital is a subject which has for a long time been regarded with the gravest anxiety, and with a view of making some endeavour to assist the medical staff to minimise the death rate from this cause the house committee was recently asked by the board of management to consider and report on the matter. At a recent meeting of the board, the house committee submitted the following rules for adoption:—The honorary anæsthetist and the honorary assistant anæsthetists shall administer anæsthetics in the hospital. They shall attend the hospital on such days as the house committee may assign to them, and, when practicable, at such other times as their services may be required for operations. When neither the honorary anæsthetists nor an honorary assistant anæsthetist is available, the operating surgeon may appoint a member of the honorary medical and surgical staff, or one of the resident medical officers, to administer the anæsthetic, but no resident medical officer may administer chloroform unless it be in the presence and under the supervision of the honorary anæsthetist or one of the honorary assistant anæsthetists. The honorary anæsthetist shall give systematic and practical instruction in the administration of anæsthetics to the fifth year students attending the hospital, provided that students availing themselves of such instruction pay each a fee of one guinea per annum to the honorary anæsthetist. The proposed rules were sent back to the committee to be remodelled and to obtain the opinion of the medical staff concerning them.

Lecithin.—Messrs. Parke, Davis & Co., after working for some time to isolate a natural phosphoglyceride, have succeeded in isolating it in the form of a lecithin containing a large percentage of phosphorus. It favours acceleration of nutritive changes, increases the appetite, stimulates cell-growth, and exerts a tonic and regulating action upon the nervous system. Dose, 1½ grains in pill 3 times a day.

Vichy Waters.—These well-known mineral waters will be found advertised in our advertising columns. M. Maurice Segur, of Pitt-street, Sydney, is the wholesale agent for Australia.

MILITARY INTELLIGENCE.

COMMONWEALTH MILITARY FORCES.

NEW SOUTH WALES.

Australian Army Medical Corps—Militia Establishment.

To be Lieutenants:

Mackay, Captain George Archibald Innes, from the New South Wales Scottish Rifle Regiment.
Read, William Henry, M.B.

As a result of the reorganisation of the Army Medical Corps in New South Wales, the old distribution of officers amongst the various regiments and units has been cancelled in favour of the following:—

Lieutenant-Colonel T. H. Fiaschi, D.S.O., senior medical officer, Australian Light Horse Brigade; Lieutenant-Colonel W. L'E. Eames, C.B., Garrison Artillery, Newcastle, senior medical officer, Northern District; Lieutenant-Colonel R. E. Roth, D.S.O., principal medical officer, officer commanding Army Medical Corps, militia: Major A. J. Hood, 1st Regiment Scottish Rifles; Major A. E. Perkins, D.S.O., 3rd Infantry Regiment; Major R. G. Alcorn, 4th Light Horse Regiment; Major J. L. Beeston, commanding No. 2 Field Hospital, Newcastle; Major G. A. Marshall, commanding Garrison Company, Army Medical Corps; Major G. H. W. Smith, No. 1 N.S.W. Battery, Field Artillery; Major T. M. Martin, commanding No. 1 Infantry Bearer Company, A.M.C.; Major F. W. Hall, commanding No. 1 Field Hospital, Sydney; Major G. L. Mullins, staff officer medical services; Captain F. H. Wrigley, 5th Light Horse Regiment; Captain B. J. Newmarch, 1st Infantry Regiment; Captain G. Read, 2nd Light Horse Regiment; Captain C. A. Edwards, 2nd Infantry Regiment; Captain W. M. Helsham, commanding No. 1 Mounted Bearer Company, A.M.C.; Captain R. D. McMaster, 3rd Light Horse Regiment; Captain J. Kerr, Garrison Artillery, Wollongong; Captain M. O'G. Hughes, N.S.W. Irish Rifles, Sydney; Captain H. K. Bean, Garrison Company, A.M.C., Newcastle; Captain J. A. Dick, St. George's English Rifle Regiment; Captain H. Stoker, No. 4 N.S.W. Battery, Field Artillery, Wagga Wagga; Captain A. H. Horsfall, D.S.O., 4th Infantry Regiment, Newcastle; Captain R. U. Russell, No. 2 Field Hospital, A.M.C., Newcastle; Lieutenant H. E. Lee, 6th Light Horse Regiment; Lieutenant R. Beith, Garrison Artillery, Wollongong; Lieut. J. MacPherson, No. 3 N.S.W. Battery, Field Artillery, Young; Lieutenant H. H. Marshall, No. 1 Infantry Bearer Company, A.M.C.; Lieutenant D. Luker, No. 1 Field Hospital, A.M.C.; Lieutenant G. A. I. MacKay, 2nd Regiment, Scottish Rifles, Lismore; Lieutenant W. H. Read, Garrison Artillery, Sydney; Second Lieutenant and Quartermaster E. J. Beauman, Army Medical Corps, militia. The following officers are on the unattached list:—Major J. Marshall, Bega; Captain J. B. Moore, Bathurst; Captain H. Kirkland, Lithgow; Captain N. R. Howse, V.C. (hon. major), Orange; Captain G. S. Samuelson, Armidale; Captain E. P. McDonnell, Forbes; Lieutenant W. Kelly, Orange; Lieutenant G. Watt, Narrandera (absent on leave); Lieutenant J. English, Yass; Lieutenant C. L. Dawson, Berry; Lieutenant F. G. Connor, Willoughby; Lieutenant C. S. Willis, Mount Magnet, W.A.; Lieutenant H. R. Cope, Glen Innes; Lieutenant N. J. Dunlop, Newcastle; Lieutenant W. H. Burkitt, Goulburn; Lieutenant A. Y. Fullerton (hon. captain), Murrurundi.

QUEENSLAND.

Militia Establishment.

To be Lieutenants:

Hoare, William Wallace, M.B.
Holt, Arthur Christian, M.B.
Price, Thomas Arthur, M.B.
Page, Frederick William Tudor

Volunteer Establishment.

To be Lieutenants:

Berry, Robert Sewers.
Fearnley, Warren James, M.B.
Macdonald, Arthur Joseph.
Richard, Samuel Jat ez, M.B.
Stewart, Andrew, M.B.

SOUTH AUSTRALIA.

Militia Establishment.

To be Lieutenants:

Hornabrook, Rupert Walter, M.B.
Johnson, Edward Angas, M.D.
Russell, Herbert Henry Ernest, M.B.
Reissman, Charles Henry, M.B.

WEST AUSTRALIA.

Volunteer Establishment.

To be Lieutenants:

Burkitt, Ormsby.
Officer, Edward Albert.

NEW ZEALAND.

New Zealand Volunteer Medical Staff.

Adams, Robert Noble, to be Surgeon-Captain.
Green, Joseph, to be Surgeon-Captain.
Gordon, Colin Huntly, to be Surgeon-Captain.
Hislop, Walter, to be Surgeon-Captain.
Martin, Surgeon-Captain Albert, to be Surgeon-Major.
Pairman, Surgeon-Captain Thomas Wyld, to be Surgeon-Major.
Reid, Stuart Bathgate, to be Surgeon-Captain.
Sale, Jonn Bonwell, to be Surgeon-Captain.

PERSONAL ITEMS.

Sir Thomas Fitzgerald, of Melbourne, sailed by the R.M.S. "Australia" on March 8th for Colombo for a sea voyage for the benefit of his health.

Dr. A. J. Brady, the retiring president of the New South Wales Branch of the Dental Medical Association, left Sydney on March 9th by the R.M.S. "Orontes" on a seven months' trip to Europe.

Dr. Harvey Nickoll, of Mudgee, and his wife were driving along the Gulgong-road when the horse shied at some cattle. The buggy was capsized. The doctor escaped unhurt, but Mrs. Nickoll received severe injuries to her back.

Dr. Angel Money, who has been on a pleasure trip to Canada, returned to Sydney by the R.M.S. "Aorangi" from Vancouver, and has resumed practice.

The resignation of Dr. Bronte Smeaton as superintendent of the Adelaide Hospital has been accepted by the Government of South Australia.

Dr. Dey, late of Wilcannia, has succeeded to the practice of Dr. Scott, Bourke (N.S.W.), and has been appointed medical officer to the Bourke District Hospital.

Dr. Bell has succeeded to the practice of Dr. Dey at Wilcannia, N.S.W.

Dr. G. A. Innes Mackay has removed from Maclean, Clarence River, to Lismore, Richmond River, N.S.W.

Dr. Percy L. Broadbent has removed from Berry to Dapto, N.S.W.

Dr. C. Bickerton Blackburn has commenced practice at 221 Elizabeth-street, Sydney.

Dr. Herbert McClelland Inglis, has resigned the appointment of public vaccinator for Cheviot district, New Zealand.

Dr. Church has resigned the appointment of public vacinator for Naseby, New Zealand.

Dr. A. C. Stout has resigned the appointment of Officer of Health to the Subiaco Local Board, West Australia.

Dr. T. P. McInerney, who has been absent in South Africa for some months, returned to Melbourne by the steamer "Nineveh," which arrived towards the end of last month.

Dr. W. P. Birmingham has resigned from the Hon. Medical Staff, Fremantle Hospital, West Australia.

Dr. Brown has resigned the appointment of Health Officer, Victoria Park Local Board, West Australia.

Dr. Alexander Douglas, Department of Public Health, Oamaru, N.Z., has been granted leave of absence.

Dr. C. D. Halcomb has resigned the appointment of junior medical officer, Hospital for the Insane, Gladesville, N.S.W., and joined Dr. R. E. Grigson, of Muswellbrook, in practice.

Dr. L. Conroy has resigned the appointment of Junior Medical Officer, Hospital for the Insane, Parramatta, N.S.W.

Dr. Lines has resigned the appointment of House Surgeon to the Hobart Hospital, Tasmania.

Dr. L. E. Barnett, of Dunedin, has been commissioned to procure an up-to-date X-rays apparatus for the hospital, while on his visit to London.

Dr. Talbot, who has been for some time assistant medical officer at the Timaru Hospital, left that institution at the beginning of January in order to go to London for further study. Previous to his departure he was presented by the staff of the hospital with a handsome dressing-case.

Dr. J. E. Rodgers, of Wyndham, left on a trip for England in February last.

Dr. Makgill, who has occupied the post of District Health Officer, Auckland, N.Z., ever since the passing of the Public Health Act, is now being removed to the Head Office, Wellington, where he will have charge of the bacteriological work connected with the Health Department. Dr. Frengley succeeds Dr. Makgill in the Auckland office.

Dr. T. O. Williams has just returned from a trip to Okoroire, N.Z., where he went to recuperate after his illness. He has now recovered sufficiently to resume practice.

Dr. W. M. Smith, of Dunedin, intends leaving shortly on a 12 months' visit to England. Dr. E. Blomfield will act as his *locum tenens*.

Dr. A. Martin, of Wellington (N.Z.), has taken Dr. W. E. Herbert into partnership.

Dr. C. H. Scott has resigned his appointment as medical officer to the Hospital at Bourke, N.S.W.

Dr. T. A. McLean, who recently resigned his position as resident medical officer at the Geelong Hospital for the purpose of entering upon private practice in Gippsland, Victoria, was on March 1st entertained by the staff of the hospital at a social and dance, and was presented with a valuable clock.

Dr. Ercole, the Government medical officer at Whitecliffs, N.S.W., who is leaving for Sydney, was entertained at a social at Byers's Hotel, and presented with an illuminated address. Dr. Ercole has been succeeded by Dr. De Marco, from Coolah.

Dr. T. Storie Dixson, of Sydney, has been elected a Fellow of the Royal Colonial Institute.

Dr. C. L. McCarthy, the Health Officer of Footscray, Victoria, has been granted nine months leave of absence, and is about to take a holiday trip round the world. He was presented with a handsome silver cigar case and a spirit flask by the Footscray Cycling Club on the 4th inst. Mrs. McCarthy also was presented with a silver hot water kettle and stand, and Miss McCarthy with a case of silver-backed brushes and comb.

Dr. C. R. Watson, who has been one of the most active members of the Masonic Lodge Kilwinning-Orient, No. 14, being about to take a trip to Europe for the benefit of his health, the brethren determined to present him with a substantial mark of their esteem and appreciation of his long services. After the ordinary lodge business had been disposed of on March 10th the members and visitors and many ladies assembled at St. George's Hall, Newtown. The W.M. (Mr. van Darn), who occupied the chair, referred in very cordial terms to Dr. Watson's connection with the lodge, in which he had held the highest position, and his services to Masonry generally. On behalf of the members of the lodge he presented him with a purse of sovereigns.

Dr. T. N. Wright, on his retirement from the position of medical officer of Hope of Stroud Lodge of Oddfellows, at Stroud, N.S.W., was presented with a gold medal and a travelling bag.

MEDICAL APPOINTMENTS.

NEW SOUTH WALES.

Craig, Robert Gordon, M.B., Ch.M., to be Hon. Demonstrator in Anatomy the University of Sydney for the year 1904.

Dey, R., M.B., to be Medical Officer, Hospital, Bourke, *vice* Dr. Scott, resigned.

Kirkland, T. S., M.D., F.R.C.S.E., to be a Member of the Dental Board of New South Wales.

MacLaurin, Charles, M.B., C.M. (Edin.), to be Honorary Assistant Surgeon, Royal Prince Alfred Hospital, Sydney.

Robertson, Dr. Lionel, to be Medical Officer, Temora Hospital.

The following gentlemen have been appointed Resident Medical Officers at Royal Prince Alfred Hospital, Sydney:—

V. Benjafield, M.B., Ch.M.
C. S. Browne, M.B., Ch.M.
G. A. Buchanan, M.B., Ch.M.
T. P. Connolly, M.B., Ch.M.
H. O. Lethbridge, M.B., Ch.M.
W. Mawson, M.B., Ch.M.

VICTORIA.

Bush, Dr. H. S., to be a Resident Medical Tutor at Trinity College.

SOUTH AUSTRALIA.

Morris, Bedlington Howel, M.B., B.S., to be Medical Officer of the Adelaide Gaol.

QUEENSLAND.

Falkner, Edgar Ashley, F.R.C.S., L.R.C.P., to be an Official Visitor for the Hospital for the Insane, Toowoomba, Queensland, *vice* Edwin Roberts, M.R.C.S., resigned.

McEvoy, John Joseph Stuart, M.B., to be Medical Officer at Beenleigh, *vice* Arthur Ernest Malaher, L.S.A.L., resigned.

Webb, Fritz William, M.B. M.Ch., to be Medical Officer at Croydon, *vice* Murdoch Matheson, M.D., resigned.

Calhoun, Dr. J., late of the Brisbane General Hospital, has been appointed Resident Medical Officer of the Lady Bowen Hospital, Brisbane.

Malaher, Dr., late of Beenleigh, to be G.M. Officer for Nambour and district.

WESTERN AUSTRALIA.

Coventry, Charles, M.B., Ch.B., L.R.C.P., to be Officer Subiaco Local Board of Health.

Birmingham, W. P., M.B., Ch.B., to be Honorary Consultant to the Fremantle Public Hospital.

Randell, Dr. A. E., to be Officer of Health, Victoria Park Local Board of Health.

TASMANIA.

The following gentlemen have been appointed as a Board of Examiners in Dental Surgery and Dentistry:—

Butler, Gamaliel, H., M.R.C.S.
Clarke, Arthur H., M.R.C.S.
Crowther, Edward L., M.D.
Fraser, Hugh, L.D.S.
Rodway, Leonard, L.D.S.
Sharp, Robert G.

Roberts, Edward J., M.B., Ch.B., to be House Surgeon to the Hobart Hospital.

NEW ZEALAND.

Barclay, William John, M.D., F.R.C.S. (Edin.), to be Port Health Officer for the Port of Oamaru.

The following gentlemen have been appointed Public Vaccinators for the districts set opposite their names, viz.:—

Alexander, William Copland, M.B., Ch.M. (Aber.), Wellington.
Barclay, William John, M.D., F.R.C.S. (Edin.), Oamaru.
Bartlett, William, M.R.C.S. (Eng.), Pelorus.
Bell, James Alexander Terras, M.D. (Edin.), Christchurch.
Brown, Edith Cochrane, M.B., Ch.B., Christchurch.
Clayton, Geoffrey Sherborne, L.S.A. (Lond.), M.R.C.S. (Eng.), Christchurch.
Claridge, Henry Arthur Herbert, M.B., Ch.B. (Durham), Wellington.
Cooke, James, M.D. (Irel.), L.R.C.S. (Edin.), Little River.

Dawson, William Henry, M.B., Ch.M., F.R.C.S. (Edin.), D.P.H. (Edin. and Glas.), Dannevirke.
Eccles, Horace Dorset, M.R.C.S. (Eng.) L.R.C.P. (Lond.), Tauranga.
Elliott, James Sands, M.B., B.Ch. (Edin.), Wellington.
Gibbs, Harry Edward, M.D., F.R.C.S. (Eng.), Wellington.
Gilmer, Hamilton Andrew Hugh, M.D. (Edin.), Wellington.
Greenwood, Cecil Danforth, M.R.C.S. (Eng.), L.S.A. (Lond.), Christchurch.
Hatherly, Henry Reginald, M.L.R.C.S. (Eng.), L.S.A. (Lond.), L.R.C.P. (Edin.), Wanganui.
Herbert, William Edward, M.D., B.Ch. (Edin.), F.R.C.S. (Edin.), Wellington.
Inglis, Herbert McClelland, B.M., M.S. (Edin.), Christchurch.
Izard, Arnold Woodford, M.B., B.Ch. (Cantab.), M.R.C.S., L.R.C.P., Wellington.
Jeffreys, John Graham, L.S.A. (Lond.), M.D. (Durham), Christchurch.
Johnston, Daniel, L.F.P.S. (Glas.), L.R.C.P.S. (Edin.), Fielding.
Kennedy James Price, M.B., B.Ch. (Edin.), Shannon.
Mackin, Patrick, L.R.C.P., L.R.C.S. (Edin.), M.D. (Brux.), Wellington.
Macknight, William Crawfurd, M.B., Ch.M. (Edin.), *vice* Dr. Church, resigned, Naseby.
Maclagan, David Whiteside, M.B., B.Ch., M.R.C.P. (Edin.), Kaponga.
McCredie, Andrew, L.R.C.S., L.R.C.P. (Edin.), Warkworth.
Moorhouse, Alice, M.B., B.Ch. (Glas.), Christchurch.
Monk, George Henry Hawkins, M.R.C.S. (Eng.), L.S.A. (Lond.), D.P.H., Taihape.
Paterson, Alexander, M.D., Ch.M. (Edin.), Christchurch.
Talbot, Alfred George, M.R.C.S. (Eng.), L.R.C.P. (Lond.), Christchurch.
Walker, Ernest Frederick Docetti, M.B., Ch.M. (Glas.), Wairau.
Wi Repa, Tutere, (Medical Student, Dunedin), Stewart Island.
Williams, Ernest Harry, M.B., B.Ch. (N.Z.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), Dunedin.
Will, Thomas Arthur, M.B., Ch.B. (N.Z.), Rangiora.
Will, William Johstone, M.B., M.S. (Edin.), Middlemarch.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

SOUTH AUSTRALIA.

D'Arcy, Constance Elizabeth, M.B. (Syd.), 1904.
Suckling, Frank Martin, M.B., Ch.M. (Syd.), 1903.

BIRTHS, MARRIAGES AND DEATHS.

BIRTHS.

BARCLAY.—On December 27th, 1903, at Shearman-street, Waimate, N.Z., the wife of Dr. H. C. Barclay—a son.

HOGG.—On February 6th, at Parramatta, Sydney, the wife of Dr. C. A. Hogg—a daughter.

JONES.—On February 22nd, at "Dagworth," Homebush, Sydney, the wife of Dr. G. Mander Jones—a son.

McEACHRAN.—At "Killellan," Grafton, N.S.W., on February 9th, the wife of J. F. McEachran, M.R.C.V.S.—a daughter.

REDDALL.—On February 17th, at "Berowra," Randwick, Sydney, to Dr. and Mrs. O. H. Reddall—a son (stillborn).

ROGERS.—February 29th, at Kurri Kurri, the wife of Dr. W. H. Rogers- a son.

SUTHERLAND.—On December 29th, 1903, at Milton, N.Z., the wife of James Sutherland, M.B., C.M. (Edin.)—a son.

MARRIAGES.

BELL—CULLEN.—On February 16th, at St. Mary's Church, North Sydney, by the Rev. G. Kelly, S.J., assisted by the Rev. P. B. Lawler, O.F.M., Harry Charles Rikard Bell, M.B., Ch.M., eldest son of George Bell, Adelaide, to Eily Maude, youngest daughter of M. F. Cullen, Sommy, North Sydney.

MUSCIO—WELLESLEY.—On February 13th, at the Methodist Church, King-st., Newtown, Sydney, by the Rev. W. J. Leadley, Dr. Allen Muscio, third son of P. Muscio, of Taree, Manning River, to Laura, eldest daughter of Chas. E. Jay Wellesley, of Enmore, Sydney.

NEWTON—NEILD.- On January 27th, at St. Matthias' Church, Paddington, N.SW., by Rev. G. H. Allnutt, uncle of the bride, William Newton, M.B., Tenterfield, N.S.W., eldest son of the late Adam Newton, of Sydney, to Ethel Margaret, fourth daughter of the late William Neild, of Parramatta, N.S.W.

SEXTON—RYAN.—On December 26th, 1903, at St. Bridget's Church, Quirindi, N.S.W., by the Rev. Father Harrington, P.P., Joseph Patrick Sexton, L.R.C.P.I., L.R.C.S.I., etc., eldest son of the late Patrix Sexton, of West View, Ennis, co. Clare, to Mary, youngest daughter of Richard Ryan, of Knockera Villa, Pallas Grean, co. Limerick.

DEATHS.

CRAWFORD.—On March 10th, at her residence, Bowral, N.S.W., Alice Maud, beloved wife of Dr. R. Crawford, aged 32 years.

FINDLAY.—On January 7th, at the residence of his mother, John Findlay, M.B., Ch.B. (Edin.), third son of the late John Findlay, Findlayston, North Taieri, N.Z., in his twenty-sixth year.

PIERCE.—On December 31st, 1903, at London, England, of pneumonia, William Pierce, M.D, late Government Medical Officer. Watson's Bay, Sydney.

THOMSON.—On February 22nd, at Oakleigh, Victoria, J. S. Thomson, M.B., Ch.B. (Melb.), M.R.C.S. (Eng.), late of South Melbourne, aged 39 years.

URE.—On March 9th, 1904, at 63 Cavendish-street, Stanmore, John Ure, M.D., of Brisbane, Queensland, aged 63.

LETTERS AND OTHER COMMUNICATIONS HAVE BEEN RECEIVED FROM:—

Dr. Stephenson, Dunedin; Dr. Wm. Roper, Sir Samuel, W.A.; Dr. Herschel Harris, Sydney; Messrs. Burroughs, Wellcome and Co., Sydney; Secretary, Health Department, Queensland; Dr. C. E. Corlette, Sydney.

BOOKS RECEIVED.

A Pocket Dictionary of Hygiene. By C. T. Kingzett, F.I.C., and D. Homfray, B.Sc. Second edition. London: Baillière, Tindall & Cox. Sydney: L. Bruck. 1904. Price, 2s 6d net.

A Non-Surgical Treatise on Diseases of the Prostate Gland and Adnexa. By Geo. Whitfield Overall, M.D. The Rowe Publishing Co., 1312-34 East Washington-street, Chicago, U.S.A. Price, 8s 6d, cloth; 12s 6d morocco.

The Melbourne University Calendar. 1904. Melville & Mullen, Collins-street, Melbourne.

Aids to Surgery. By Joseph Cumming, M.B., B.S., F.R.C.S. (Eng.). London; Baillière, Tindall & Cox. Sydney: L. Bruck. 1904. Price, 4s 6d net, cloth.

Second Paper on Movable or Dropped Kidney, Cure of Migraine or Periodical Headache, Nervous Exhaustion, Melancholia, Pain, etc. By C. W. Suckling, M.D., M.R.C.P. London: H. K. Lewis. Price, 1s.

The Australian Baby. By J. E. Ferguson-Stewart, M.B., C.M. Third edition. West Australia: *Swan Express* Office, Midland Junction.

Pentland's Students' Manuals—Manual of Surgery, By Alexis Thomson, M.D., F.R.C.S. (Edin.), and Alexander Melis, M.D., F.R.C.S. (Edin.). Vol. I., General Surgery. Edinburgh and London: Young & Pentland. Sydney: Angus & Robertson. 1904.

The American Illustrated Medical Dictionary. By W. A. N. Dorland, M.D. Third edition. Price, 22s 6d, plain; Index, 25s. Philadelphia: W. B. Saunders & Co. Melbourne: Jas. Little.

Nervous and Mental Diseases. By A. Church, M.D., and F. Peterson, M.D. Fourth edition. Price, cloth 25s. Philadelphia: W. B. Saunders & Co. Melbourne: Jas. Little.

A Text-Book of the Practice of Medicine. By J. M. Anders, M.D., Ph.D. Sixth edition. Price, cloth 24s 6d. Philadelphia: W. B. Saunders & Co. Melbourne: Jas. Little.

An American Text-Book of Surgery for Practitioners and Students. Edited by W. W. Keen, M.D., and J. W. White, M.D., Ph.D. Fourth edition. Price, cloth, 33s 6d. Philadelphia: W. B. Saunders & Co. Melbourne: Jas. Little.

Husband's Forensic Medicine, Toxicology, and Public Health. Seventh edition, revised and enlarged. By R. J. M. Buchanan, M.D., B.Ch., M.R.C.P., etc.; and E. W. Hope, M.D., D.Sc. Edinburgh: E. & S. Livingstone. 1904. Price, 10s 6d net.

HUDSON'S "EUMENTHOL" JUJUBES (Registered) are a Gum Jujube containing the active constituents of well-known Antiseptics, Eucalyptol, Thymus Vulg., Pinus Sylvestris, Mentha Arv., with Benzo-Borate of Sodium, etc., and exhibit the antiseptic properties in a fragrant and efficient form. Sold by all chemists; tins, 1s 6d. Are Antiseptic, Prophylactic, reduce Sensibility of Mucous Membrane. Mr. W. A. Dixon, F.I.C., F.C.S., Public Analyst of Sydney, after making exhaustive tests, says:—"There is no doubt but that 'Eumenthol' Jujubes have a wonderful effect in the destruction of bacteria and preventing their growth. . . . I have made a comparative test of 'Eumenthol' Essence and Creosote, and find that there is little difference in their bactericidal action."—[ADVT.]

AUSTRALASIAN MEDICAL GAZETTE.

PRESIDENTIAL ADDRESS.

Delivered at the Annual Meeting of the New South Wales Branch of the British Medical Association.

By A. J. Brady, L.K.Q.C.P., L.R.C.S., Sydney, Retiring President.

My first duty is to apologise for my absence from the annual meeting of this Branch. Personal business matters require that I shall be absent from Sydney at this time on a trip to Europe for a short period. I regret that I am not here personally to thank you for the high honour which you have done me in electing me as president, for the past year, of this important branch of a great association. It is an honour of which anyone may be proud. The New South Wales Branch of the British Medical Association has become a great power in the medical polity of this State, and this aspect of its functions is hardly secondary to its influence in diffusing knowledge on purely medical topics. It is my privilege to be one of the original members of this Branch, and I can look back from my presidential year to its foundation four-and-twenty years ago. Many of the little band who sat at our meetings around the board-room table in the old Sydney Infirmary are gone to their rest; of these, Milford, Moffitt, Fortescue and Wright were active organisers of this new Branch of the British Medical Association. Some we have still with us full of useful activity, as Sir Arthur Renwick, our first President, and others, whom I need not specify; but I may state that of the forty-two (42) original members of this Branch only fifteen (15) are now living. We were a weak little society then as far as medical polity went. We made no attempt at government in the profession. The only matter of this sort that I remember is, when Dr. Mackellar, returning from Melbourne, filled us with envy when he told us of the fees received by our more fortunate brethren of the Golden City of the South. As the result of this, a scale of fees was drawn up for our guidance, and from this on the fees have been on a higher standard. This was the first of the many actions which this Branch performed to improve the material status of the profession in New South Wales. Till then there is no doubt the fees for private practice were at an absurdly low level—five shillings for a consultation in the consulting room, and seven and sixpence a visit. Although no attempt was made to make the scale of fees binding on any member, we had the advantage of collective opinion on what was a proper rate—till then we were wandering without guidance in matters of policy—and there was no opportunity of interchange of opinions on matters of medical and surgical importance. The papers which were read at those old meetings of ours would not be sufficient to overcrowd the *Australasian Medical Gazette* of to-day, but many of them were of merit. One I remember particularly, when a young country member came and exhibited his patient, on whom he had successfully performed Langenbeck's osteo-plastic operation for the removal of a large fibro-sarcoma of the nose and antrum of Highmore. He read his paper on the case and described the steps of the operation, which he did practically without assistance, having only that of the anæsthetist. This was an example of courage and resource which we can admire to-day. The public might enquire, "What benefit have we received from the changes which your Association has brought about in the medical profession of this State?" Well, we can answer without hesitation. "In the higher standard of professional knowledge and skill which we can bring to your aid you have acquired something of great value to you." That our meetings have been a powerful factor in this general improvement of professional competence there can be no doubt. If men are allowed to keep to themselves, and have no interchange of opinions with their fellows, their ideas become narrow and cramped; they settle down into grooves along which they contentedly jog without any attempt at improvement, till at last they sit down contentedly in the slough of incompetence. Against this fossilising process our meetings have been a powerful medicine. The friction of intellect against intellect has prevented rusting of the mental machinery, and the light of criticism has dispelled the fogs of error. Allowing for the vast improvement in medical knowledge which has become the property of the world since 1880, the year of the formation of this Branch, I can say, as one who has known Sydney all the time, and who has visited Europe a few times during this period, that our relative advancement has been out of all proportion greater than that of the larger centres. In other words, we have come to the very forefront with the very best of them. It appears plain to me that division of labour in the profession has advanced our general status. Specialism—I do not refer only to the narrow form of it, but to the specialism which makes some men physicians and others surgeons—has created a class of men who are excellent in their own domain of medicine, and as medical practitioners, do not selfishly keep their proficiency to themselves : these men are centres for the diffusion of knowledge through the profession generally. At the time our Branch was founded, a special opinion in certain technical departments of our art was only obtainable by the wealthy, who could afford to make a trip to Europe ; now this is available to the poorest in the land, as our great public hospitals have all the special departments which are usual in the hospitals of Europe.

The position of a member of the Council of this Branch has become one of considerable responsibility—he is in a small way like a Cabinet Minister : on his word may depend peace or war. Should the Council declare a lodge inimical to the interests of the profession, the medical attendant of this lodge will be called upon to resign his post. This may be a serious personal sacrifice to him, and you may believe that the Council never, without the most earnest consideration, takes such a step as this. When it has done so, we have had notable instances of *esprit de corps* where our members have made personal sacrifices for the general good ; and why should they not ? Our race has been always ready in its larger patriotism to lay down life itself at its country's call. The government of the day has decided that war is necessary in the interests of and for the safety of the nation. Men are then called upon to make sacrifices, and they are found ready. Why should we not also be ready to stand up and fight for our rights ?

> "Wha sae base as be a slave ?
> Traitor ! coward ! turn and flee ! "

Believe me, ladies and gentlemen, if it were not for the efforts of this Branch, through its Council, the process of enslaving would be in full swing to-day. Whatever adverse criticism the Council of this Branch may have been subjected to for its dealings with individuals, the majority will, I believe, support me when I say it is better for the majority, and even for the individuals themseles, that there is, in the words of Wordsworth—

> " A light to guide, a rod
> To check the erring and reprove."

" Help thyself and God will help thee," is the saying of an older poet. Let every reputable member of the medical profession in this State come into the safe fold of our Branch ; let every one interested in lodge practice become a regular subscriber to a fund to compensate those who make personal sacrifices for the general good ; let those of us who are not so personally interested lend a helping hand, and a fund will be created which will prevent the entire sacrifice falling on a few individuals. Why should we, an intelligent body of professional men, in this regard be behind the men in other walks of life, who have funds to support their members when—I was about to say on strike—but perhaps arbitrating is more up to date ? The subscriptions to this fund must, in my opinion, be on a higher scale than that conceived by some of our members, who have such a scheme in view ; still they need not be higher than the fees of any ordinary accident society. The fund need not be a very large one, for I must again emphasise from this chair that the policy of this Branch is : " We have no quarrel with legitimate benefit societies who treat their medical officers in a proper manner." On the contrary, we regard them as highly useful and necessary institutions.

As a result of the Arbitration Act it appears that medical men may be put to a considerably increased expenditure in getting around to see their patients. If the demands of the Grooms and Coachmen's Union are granted, it may be necessary to ask the lodges to pay a slightly higher rate to meet this expenditure. The criticisms which have appeared in the daily press on the dealings of your Council with the Balmain Friendly Societies show a want of knowledge of the whole matter. It is not the method of payment which we object to, but to its utterly inadequate nature in relation to the work done. The sum of £570 a year, which it is claimed the medical man can earn, is looked upon as very attractive. It appears to be forgotten that out of this he must pay his coachman, and for the upkeep of his horses and trap, that he must rent a residence in the district and pay a servant to take messages and look after his consulting-room ; as for private practice, the unfortunate man has no time for it. For this salary he has not to work eight hours a day for six days in the week, but every day in the year, and even every hour in the day he is bound to be ready to take up his heavy burden. Other men have, with Sundays and public holidays, about two months in the year for rest and recreation ; for the unfortunate lodge doctor there is no provision for a holiday annual or otherwise. The inevitable breakdown in health which must follow such a service makes it dear at any price. We feel that we are right in advising men against selling themselves into such slavery; for

> "There is a tide in the affairs of men,
> Which taken at the flood leads on to fortune ;
> Omitted, all the voyage of their life
> Is bound in shallows and miseries."

A PLEA FOR PAINTED RAILINGS AND PAINTED WALLS OF ROOMS AS THE SOURCE OF LEAD POISONING AMONGST QUEENSLAND CHILDREN.

By J. Lockhart Gibson. M.D. (Edin.), M.R.C.S. (Eng.), Brisbane, Hon. Ophthalmic Surgeon, Brisbane Hospital for Sick Children.

I HAVE had recently under my care four fresh cases of the very definite condition which I described[*] as "ocular neuritis, simulating basal meningitis—plumbism." The appearance of so many cases at the same time, all of them fairly severe ones, though fortunately not of very long standing, and all of them cases which, in my opinion, would have suffered from permanent blindness unless removed from their surroundings, and possibly also unless treated, again called my attention to the question of source.

Although efforts to discover the source of the lead poisoning have hitherto been unsuccessful it has been apparent to those of us interested in the question that the source of the lead is available to almost all Queensland children who live in towns, and certainly to all the children of an affected family, even although one only showed symptoms of poisoning. We[†] explained the fact that one member of a family is often selected and the others are apparently unaffected, by the fair assumption that the lead was injected in very small quantities only, and that only children idiosyncratic to lead showed symptoms of poisoning. We pointed out, however, that often other children of a household showed a blue line on the gums, indicating the presence of lead circulating in the blood, but not in sufficient quantity to cause the distinctive poisonous symptoms.

It is known that lead when it gains entrance to the body is very slowly excreted by the kidneys, and in some undoubted cases of lead poisoning the Government Analyst has failed to find it in the urine, while finding it in other cases exhibiting absolutely identical symptoms. This lent colour to the belief that defective excretion in some children was a reason for their selection as those showing poisonous symptoms. I hope to-night to furnish a better explanation than idiosyncrasy for the selection in a family of victims to lead, and also to get rid of the idea that only small quantities are ingested. Shortly, I am able, I believe, and advance a very strong plea for painted walls and railings as the source of the lead, and for the biting of finger-nails or sucking of fingers , as in a majority of cases, the means of conveyance of the lead to the patient. My own personal experience is now, of course, confined to the cases exhibiting eye symptoms unaccompanied by other paralytic symptoms; but I am quite satisfied that except in isolated cases the source of the poison is the same in all Queensland children affected. It is possible that some of you have long recognised paint as a source. To my shame, I cannot remember to have done so, and I cannot remember to have ever heard it discussed as a source, or even seriously stated to be one. Mr. Henderson, the Government Analyst, says that he suggested it, but that the idea was pooh-poohed.

The four cases, all in young children, all exhibiting the same ocular signs, hardly even differing in degree, have recovered so completely and so quickly that although I showed three of them at last meeting, in onlyone was there remains of a previously intense double optic neuritis, and in only two was there a very slight remains of paresis of an external rectus which had been paralysed. I was able to show the elder brother of one case who, while not presenting any of the paralytic symptoms of lead poisoning, shows a peculiarly distinct blue line in the gum completely surrounding one of his posterior molars. The clinical picture presented by these cases is a very definite one, and one which I have not seen described in its entirety except in my own paper. The symptoms are sudden onset, with or without preliminary colic, vomiting, or malaise, and with or without retracted head and acute pains in the back of the neck, of paralysis or paresis of one or both external recti, accompaned. by optic neuritis or choked disc, so intense that any medical man at all acquainted with the appearance of a normal disc would recognise it at once. The swelling and consequent advancement of the disc in all cases most distinct, and even the surrounding retina often swollen and advanced. I called the condition *ocular* neuritis, because no case of the many I have seen has the optic neuritis existed without paralysis of an external ocular muscle; in only one case where one muscle only was paralysed was it other than an external rectus. In very severe cases the other external ocular muscles are paralysed. These have been cases of some standing, and have resulted in blindness. The cases, excepting the very severe ones with pain in the neck muscles and retracted head, are often hardly unwell, and have no temperature. As a rule the internal squint disappears before the optic neuritis. The squint is always recovered from, even when the retro-bulbar neuritis results in atrophy and blindness. The cases do not die if removed soon enough from their homes. The oldest of the four cases admitted to the Children's Hospital in January is eight years, the youngest two years. In the urine of the two of the four, E.M., aged eight, and E.B., aged two, the Government Analyst found lead ·4 milligrammes per litre in one and ·32 milligrammes per litre in the other. A second sample of E.B.'s urine sent to the Analyst when recovery was nearly complete yielded only a trace, 1 milligramme of lead per litre of urine. The two other cases gave no lead in the urine submitted to the Analyst. I am of opinion that the Government Analyst has proved that the water from galvanized iron tanks may be excluded as a source of the poison, and that abundant observations have proved that the presence of metallic zinc in the water precipitates any lead which may get into the tank. The fact that the Analyst was able to find lead in three specimens of tank water prior to my former paper is capable of explanation. It appears that neither lead carbonate nor zinc carbonate is soluble in pure water, carbonic acid must be present, but it always is present in natural waters. Only the presence of metallic zinc in the tank deposits lead from its solution, the equation being, according to Mr. Henderson, as follows:—

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[*] *A.M.G.*, 1897, page 479.

[†] A. Jefferis Turner, *A.M.G.*, 1897 page 475; J. Lockhart Gibson, *ibid.*

$$\mathrm{Pb\,CO_3 \times CO_2 + Zn = Zn\,CO_3 \times CO_2 + Pb.}$$

He states that the oxide of zinc which forms upon and covers insides of galvanized iron tanks is so porous that it does not prevent the contained water from coming into contact with the metallic zinc underlying it.

In weighing evidence in favour of any source we must bear in mind that it is some source available to a majority of Queensland children, except the very poorest, who live in towns. Paint occurred to me as a possible source. I took it as a hypothesis and have endeavoured to get facts to prove the hypothesis correct. In this there has been no element of taking the cart before the horse, but perhaps more apparent than real. It will be convenient to state the evidence in support of my hypothesis in as tabulated a form as its nature will admit.

1. A majority, probably all the children we have observed affected with lead poisoning, have lived in houses whose rooms have been painted, or at least whose verandah railings have been painted. All four children under discussion have done so. The children of school age who may not have had much opportunity of contact with painted walls and railings at home have opportunity at our public school buildings.

2. Two conditions of painted surfaces would be more than usually liable to induce poisoning, viz., (*a*) freshly painted or at least sticky surfaces; (*b*) painted surfaces which have either been exposed to the sun and air, and whose paint has lost its oil and become a dry easily detachable powder, or which though not exposed have lost some of their oil and gloss, and which when rubbed yield a powdery substance to the touch and possibly distribute it to the dust of rooms. Dust, of course, is capable of being both swallowed and inhaled. A greater danger, however, is adhesion of the paint either by nature of its stickiness or by nature of its powdery character, and fingers and nails by which it is carried to the mouths of children, especially in the case of those who bite their nails, suck their fingers, or eat with unwashed hands. A further danger worthy of consideration is absorption of the very soluble lead salts contained in paint through the skin of children's hands and feet. The sweat moistened skin in summer would render this method of absorption more likely. We must remember that arsenic poisoning has been proved to occur by absorption of powdered arsenic through the skin. In considering lead detachable from walls of rooms and from

verandah and other railings, as a possible cause of lead-poisoning, we have a very complete parallel in the at one time pretty common and well recognised poisoning by arsenic from the powder distributed to rooms by green wall-papers.

3. To ascertain whether the powdery substance so easily detachable from painted surfaces which have been exposed to the weather was or was not composed largely of lead, I supplied the Government Analyst with two pieces of calico, each about a foot square, whch had been rubbed against such verandah railings. I asked him, 1st—How much lead is present on one piece of calico? 2nd—Is the lead on the other piece in an easily soluble form? Answers:—1st—The total lead on one of the pieces of calico was 0·3 grammes, equivalent to 0·375 grammes of white lead. It probably existed in the form of the very soluble hydrated carbonate. 2nd—Eighteen square inches from the centre of the other piece of calico were soaked in distilled water for 24 hours. This treatment dissolved practically the whole of the lead. No attempt was made to keep carbonic acid out of the distilled water, as it is present in all natural waters.

4. The child, E.M., whose brother shows so marked a blue line on his gums, but no paralytic symptoms, lived until December 5th in a house whose rooms were not painted, and whose verandahs and verandah railings had been so long unpainted that the child's mother says there was really no paint on them. They moved to their present house on December 5th. The child became ill on December 14th, or between that and December 18th, with colic or vomiting. A squint was noticed at about the new year, and double vision, of which I shall have more to say at another time, as it was monocular. She was brought to the Children's Hospital on January 7th. The house they moved into had been painted recently, and they were its first occupants, and the smell of new paint was very distinct. The walls were sticky. The smell has now disappeared, and there is no longer stickiness. It will be freely admitted that walls still sticky with paint would contaminate the hands of a child very readily, and that the likelihood of such hands being carried to the mouth would be very great. When explaining this idea to the mother she said, "*And those are the only two of my children who bite their nails.*"

The child, E.B., aged two years, had not, of course, been to school. The source of the poison was to be looked for, therefore, in his own house or surroundings. He had lived up to the time of admission to the hospital in a house which has remained unoccupied since his father left it in the end of January. I obtained leave to visit this house, and invited Mr. Henderson to accompany me, which he was kind enough to do. Our object was to obtain evidence as to whether lead was to be found in the dust of the room chiefly occupied by the boy, and whether the walls of the room yielded powder of lead, which was easily detachable. The house was completely painted throughout, and had evidently been painted for fully three years. The *verandah floors* were all painted as well as the railings, and there was painted lattice work around part of the verandah. The house, in fact, formed a simple lead trap, provided the paint was detachable and evidence could be obtained of its conveyance to the patient.

The paint in the room, and indeed in all the rooms, was in good condition, having a polish on it on walls and ceiling. The floor of the room was painted for a breadth of some two feet at its margin. The verandah floor was completely painted, and here the paint was dried and powdery on the surface. Pieces of calico cloth, 9 in. x 4 in., were used for rubbing the ceilings, walls of the room, painted floor margin, and verandah floor. They were rubbed firmly on the painted surfaces; Mr. Henderson says, vigorously.

There was not much dust in the room, which had evidently been well cleaned out before the house was vacated. Samples of dust were carefully brushed off ledges into watch-glasses with a camel's-hair brush, to avoid dislodging the paint.

Analysis of calico cloths and of the dust samples gave the following result:—

1st.—From the cloth rubbed on the ceiling whose paint was very glossy and showed no signs of wear and tear, no lead was obtained.

2nd.—From the cloths rubbed on the walls where the painted surface showed signs of wear and tear, 2 milligrammes of lead carbonate were obtained.

3rd.—A similar quantity of lead carbonate was obtained from the cloth rubbed on the painted floor margin.

4th.—From the cloth rubbed on the verandah floor 12 milligrammes of lead were obtained.

5th.—Dust.	Weight of dust.	Lead Carbonate found.
(*a*) From top of moulding above the door	·2 grammes	1·5 m. gram.
(*b*) Top of fanlight facing side verandah	·25 grammes	Nil
(*c*) Top of door facing front verandah ..	·25 grammes	0·2 m. gram.
(*d*) Top piece of venetian blind	·32 grammes	Nil
(*e*) Top of skirting near door and side verdah	·2 grammes	Nil

A very important observation on the house was the following:—The day was a very warm, oppressive one. My hands were moist with sweat, and I noticed touching the walls with my fingers always brought off a stain of paint, and that it came off much more noticeably on my fingers than upon the calico cloths. This can be demonstrated by anyone on moist painted surfaces that have been painted for any length of time.

The child, E.B., aged two years, who lived in this house, does not bite his nails nor suck his fingers, but he spent his days with bare feet on the painted verandah floor, whose painted surface was so powdery and easily detachable. His father tells me also that he was very fond of standing grasping the verandah railings and placing his face against and his nose through them. Their paint was powdery and easily detachable. The child is in the habit of putting everything into his mouth, and he may have sucked the verandah railings. No doubt his hands were often on the floor as well as on the rails, and no doubt also he carried them sometimes to his mouth. It is possible that some poison may have been absorbed from the verandah floor through the skin of his feet or through that portion of the skin occupied in sitting.

It will be seen, therefore, that there is an intermediate state of painted walls and railings where the danger of lead being distributed from them to occupants of a house is comparatively non-existent, viz., the stage between the stickiness of comparatively new paint and the powdery or semi-powdery condition of old paint. While the paint after ceasing to be sticky has remained glossy, the danger of lead contamination of hands would be expected to be very small, and the state of the ceiling in E.B.'s room confirms this view. The walls of the same room, which showed more exposure to wear and tear, and which had to some extent though not very markedly lost their gloss, contaminated my fingers very decidedly, and calico cloths rubbed upon them only less decidedly.

6. Upon learning from the mother of E.M. that the only two of her children who showed marked signs of the presence of lead in their systems bit their nails, I made further enquiries to see whether other cases did so also. I found that the two other girls who, with E.M. and E.B., were the immediate cause of the present enquiry, also bit their nails badly; also that another inmate of the hospital suffering from the arm and leg form of lead palsy, sucked her thumb. I then asked the resident surgeon, Dr. Lucy Gullett, to communicate with the parents of a number of undoubted lead cases and ask if they bit their nails. She obtained ten answers to twelve post cards, and of these eight bit their nails or sucked their fingers. Two were said to do neither. Several colleagues who have been kindly making enquiries from their lead patients have found that a large majority bite their nails or suck their fingers.

The ready adhesion of paint to my sweat moistened fingers made me ask Dr. Gullett to look up the hospital records for some years, and ascertain whether cases of lead poisoning were more frequent in summer than in winter. I thought it likely that an affirmative answer would favour the conclusion that paint is the source. It was found that from 1898 to 1903, viz., six years, 85 *cases of lead poisoning* had been treated as in-patients at the hospital; that of these, 42 were admitted during the months of December, January and February, our hottest months; that 28 were admitted during October, November, March and April; and that 16 only were admitted during the five cooler months.

In a house to which I had been taken by Dr. Salter, who had been much interested in the lead question, but whom I have not quite converted to my view, it seemed to me that valuable evidence was obtained of the method by which poisoning occurs. White painted railings and a white painted gate, from which the paint was readily detachable as powder, separated a small garden from the street. The sitting-room and back verandah were painted; there was a very narrow painted verandah passage having some sharp turns in it leading to some back verandah stairs; at each corner the paint showed marked signs of rubbing at the height where the children's hands would come into contact with it when going smartly downstairs. One of the affected children in this household sucked her thumb. She has had repeated attacks of lead poisoning, occurring always in the summer months.

The point most emphasised regarding treatment in my last paper was removal of the cases from their homes. I have been accustomed to put those who have eye symptoms, and who come under my care in bed, to inject pilocarpin daily for six weeks to the extent of causing diaphoresis, and to give iodide of potash. The pilocarpin I have given in the hope of relieving tension in the optic nerve sheath, and I should be disinclined to discontinue its use. Still, I am convinced that removal of the cases from their homes to the hospital is more important than anything.

The fact that arms and legs are affected in some cases, and that ocular neuritis occurs in others, and that seldom or never are the two conditions coincident, shows that different parts of the peripheral nervous system are susceptible in different children, and makes one hesitate to exclude personal susceptibility or idiosyncrasy from playing a part in determining the victims to lead in any special family. Still, if my contention to-night be correct, the children have an abundant supply of lead available, and do not require to be idiosyncratic to it.

Although not averse to leading a crusade against the semi-vandalism of covering the prettily grained pine linings of our houses with paint, I am glad to think that the apparent fact that most of the cases bite their nails or suck their fingers will give us help in at least preventing the frequently recurring attacks which the ordinary lead cases get, and will enable us also to educate the public in the matter of prevention of primary attacks.

I have until now been in the habit of saying to patients' parents, " You had better avoid tank water for drinking purposes " ; but I do not know the source of the lead—I only know that lead is the cause of the affection. I shall henceforth, unless I am offered a better explanation, blame paint.

(Read before the Queensland Branch of the British Medical Association.)

A Hospital Portrait Gallery, Brisbane.—Some years ago, while medical superintendent of the hospital, Dr. E. Sandford Jackson set himself to collect photographs of persons who were identified with the early history of the institution, and he has lately presented the result of this collection, together with a number of groups marking the growth of the nursing staff, to the committee, in the hope that these may form the nucleus of a substantial collection in the future.

A CONTRIBUTION TO THE STUDY OF NEOPLASMS.

By Arthur Styles Vallack, M.B., Ch.M. (Syd.), Bowral, N.S.W.

Of all the problems which confront medical science at the present day, probably none has excited a more general interest, either amongst the medical profession or amongst the general public, than that presented by the causation of cancer. The amount of research work done in recent years in this connection has been enormous, and in many countries patient and competent workers have expended much time and labour in attempting to throw some light upon the matter. But, though the results of their activity have been both interesting and valuable, we seem to be as far off as ever from arriving at any general consensus of opinion. Speaking broadly, the various hypotheses which have been brought forward to account for the origin of malignant growths divide themselves into two groups, viz., the parasitic and the developmental. The former regards the excessive cell growth as stimulated by irritation of the cells due to some living parasite introduced from without; the latter regards the process as due to some intrinsic perversion of the reproductive function of the cells themselves.

Of late the mind of our profession seems to be obsessed by parasites. We live in the age of microbes. The only explanation of any morbid phenomenon which appears to us in any way complete or satisfactory is that provided by the discovery of a living *causa causans*. Indeed, it is only natural that this should be so. It is not long ago since the etiology of tubercle or malaria was as obscure as that of gout or epilepsy. Unquestionably, bacteriology has done far more to place our art upon a scientific basis than any factor which has operated within recent years. Is it any wonder, then, that the pathological dove, after hovering long over the troubled sea of ignorance and doubt, longs to find a secure resting-place for her foot upon the back of a bacillus or the pseudopodium of a protozoon? It appears to me that this bias has at times had the effect of narrowing our conceptions of disease in general. We focus our gaze to the twelfth-inch oil immersion, when by putting away the microscope and stepping back a few yards we might get a much more comprehensive and enlightening view. Perhaps in no field of observation and research has this tendency had a more invidious effect than in regard to our opinions concerning cancer. I believe that we have violently, and without justification, wrenched a phenomenon from the group to which it naturally and properly belongs, and have attempted to force it into the company of pathological manifestations with which it has no relationship at all. We have laid hands upon the malignant growths, and have tried to drag them from their obvious position amongst the neoplasms, and dump them down amongst the parasitic diseases. A pathologist once said to me: "Cancer *must* be a parasitic disease." That illustrates an extreme instance of what I am afraid is a rather common mental attitude amongst us. We want cancer to be a parasitic disease—to be cognate with processes which we more or less understand—rather than that it should prove to be akin to those phenomena concerning which our knowledge might be compared to the darkness which can be felt. The proliferation of cells in response to some stimulus foreign to the organism we know something about; but proliferation on account of some innate tendency, as in the natural growth of a tissue, is something at present outside the circumference of our knowledge. The exponents of the parasitic theory have based their arguments principally upon these grounds:—

1. The well-known power of many parasites to cause cell proliferation.
2. The discovery of alleged parasites in cancer.
3. The fact that certain organisms found in cancer are capable of producing in animals growths which histologically bear a certain resemblance to carcinoma.

With regard to the second point, various forms have been described by different observers. The earliest observers described bacterial forms, which they regarded as specific. Leyden, Sjöbring, and others have stated their opinion that certain protozoa are the causative agents. Russell, Sanfelice, Roncali, Plimmer, and others believe the organism of cancer to belong to the blastomycetes. Otto Schmidt, of Cologne, claims to have proved that these various forms are all the same organism in different phases of development. He states that he has grown the organism artificially and produced a specific toxin which, on injection into patients suffering from cancer, gives a specific reaction with the cancerous tissue similar to the effect of tuberculin on tubercular deposits. It is also stated to have a curative effect, causing atrophy of the growths. Lovell Drage, however, has pointed out that too much stress must not be laid upon this reaction, as he has succeeded in obtaining a similar effect by the injection of certain compounds of cinnamic acid.

With regard to the fact that certain organisms, such as that isolated by Plimmer, are capable of producing growths which have some histological resemblance to carcinoma, it seems to me that the real point of importance is not so much a matter of histological similarity as of functional resemblance. *Function is not only the most refined, but the most accurate test of structure.* How extreme is the histological resemblance of round-celled sarcoma to granulation tissue, how extreme is their functional difference! Many of these artificially-induced growth do not behave clinically like malignant growths at all.

Let us now take a general survey of the neoplasms. They are of the most diverse origin, and are widely varied in structure, ranging on the one hand from the lowly organised sarcomata, which probably represent the most simple cell structure found in the body, to the highly organised and complex teratomata, even if they do not, as I shall later on point out, prove closely related to even more highly organised structures. They inhabit every situation in the body, and represent every tissue in their formation—in fine, they exhibit features of the most diverse character. What, then, is the property which is common to them all? By what test shall we know them? I would define the quality in two words, "Essential uselessness." Other structures may become useless by reason of accident or disease, or may be rendered useless by the course of evolution and become mere vestiges of the past. The neoplasm is essentially useless, not essentially antagonistic, as we are apt to think, but absolutely useless. This is not, so to speak, a fortuitous circumstance, but a specific and defining characteristic. We see here a marked contrast to the cell proliferation which takes place in the infective granulomata; this cell proliferation has a distinct and definite purpose for the safeguarding of the organism and the destruction or isolation of the invader. If the foe be overcome, the proliferation at once ceases. The new formation has a definite function to perform. Similarly in the repair of injuries and in compensatory hypertrophies we see cell multiplication in response to a demand and for the benefit of the organism. Function is the test, not apparent structure. Who could, by microscopic examination, detect the difference between an osteoma and a bony callus? But what a wide difference is shown in function.

The next point to which I would call attention is the fact that the *cells of neoplasms always reproduce their own kind.* I here disregard the apparent exception of malignant supervening upon benign growth. Here, again, we find a broad contrast between the malignant growths and the infective granulomata. For example, the metastases of a carcinoma markedly resemble the parent growth, both in regard to the form and arrangement of the cells composing them—in fact, *they are direct descendants of these cells.*

If a carcinoma of the breast give rise to a secondary growth in the liver, it is a breast carcinoma growing in the liver and not a liver carcinoma at all. Surely if the alleged parasite can pass from one epithelial cell to another this would not be the case.

The occasional rare instances of the inoculation of a second person with cancer have been brought forward in support of the parasitic theory, but the most interesting and conclusive case recorded by Tross appears to me to point unmistakably in the opposite direction. In this instance, a man, whose wife suffered from uterine carcinoma, developed a growth upon the glans penis. The two growths were histologically identical; that is to say, that this growth was not an epithelioma of the penis, but a uterine carcinoma engrafted upon the penis—a clear case of tissue implantation. Other similar cases have been recorded, and are quite in accord with the known fact that in the lower animals carcinoma can be implanted into other animals of the same species. It is worthy of note also that these implantations will not grow in an animal of another species. In this, again, we have a contrast with most of the known parasitic diseases. Cases have also been recorded of the implantation of much more highly organised growths. For instance, ovarian adenomata have grown in the abdominal scar after removal of the parent growth, yet it is difficult to believe that these comparatively highly organised tumours are due to the irritation of parasites. We see a marked difference in the behaviour of tissues when attacked by known parasites. Here the reaction is greatly modified by the nature of the particular structures attacked. Take, for example, the invasion by the pneumococcus of the lung, the pleura and the joints. Who would suspect, from clinical or histological observation, that pneumonia, pneumococcal empyema, and pneumococcal arthritis were due to the same parasite?—so profoundly is the pathological process modified by the structure of the tissue attacked.

It thus appears as though the essential factor in the formation of the new growth was not a parasite, but some intrinsic perversion of cell function; the cell, itself, in fact, has become a parasite; it is no longer subservient to the needs of the organism, but henceforth its interests are entirely confined to its own preservation and that of its offspring. In other words, *the essential characteristic of a neoplasm is that it has freed itself from the domination of the organism and achieved an individuality of its own.* I believe that in these words achievement of individuality lies the key of the whole situation. It is a functional distinction, and not one to be detected by histological methods at present at our disposal.

We see, then, that the essential characteristic of a new growth is the achievement of individuality and development along lines which disregard entirely the common good of the organism. The normal cells of the body are, so to speak, under the domination of the organism; the functions of each cell tend to the persistence of the organism rather than to the persistence of the cell itself. I think that we often lose sight of this, and regard an organism less as an individual than as a collection of cells. By seeing things too much in detail we lose our sense of perspective. Now, apart altogether from any abnormal or pathological process, it sometimes happens that a cell escapes from the domination of the organism, and achieves an individuality of its own; henceforth its efforts are no longer directed towards securing the benefit of the parent organism, but towards securing that of itself and of its offspring. This happens in the phenomenon of reproduction. For reproduction to take place amongst the higher forms of life it is essential that the cell which is to reproduce the animal should have this individuality impressed upon it from without. I should therefore suggest that we might employ the term *impressed individuality* to denote this phenomenon. When the ovum is fertilised by the spermatozoon, it assumes its individuality immediately, and begins to take the necessary steps to secure the future of itself and its offspring, and its actions display a total disregard for the interests of the organism from which it sprang. It is an individual from the moment when fertilisation has taken place.

A second method in which a cell may achieve individuality is by being detached by violence from its connection with other cells. If the ovum of the sea-urchin be taken when in the two-cell stage and shaken up so as to detach the cells from each other, the result will be that two sea-urchins will be produced. They are smaller, indeed, than the one which would have been formed had development not been interfered with, but otherwise are structurally and functionally perfect. If the ovum be similarly treated when in the four-cell stage, four adults are produced. It is also well known that in some of the lower forms of life, if an individual be divided, two perfect individuals result. For these phenomena I would suggest the term *enforced individuality.*

There is yet a third way in which a cell may achieve individuality without any extraneous influence being brought to bear upon it. We may term this *acquired individuality.* In many of the lower types of life, this is the normal method of reproduction. The cell ceases to subserve any useful function as regards the organism, and commences to proliferate with the object of constructing another individual; in other words, the cell has freed itself from the domination of the organism, and has acquired individuality—asexual reproduction has taken place. It is usually considered that amongst the higher animals, reproduction is always sexual—that is, the individuality is impressed; but I do not know whether any observer has pointed out that asexual reproduction does occur, even in the case of man. Consider the case of twins contained in one chorion. Here we see that the two fœtuses were produced from a single ovum. It is evident that after division into two cells, each of these cells has produced a complete fœtus, without the assistance of any foreign element. Individuality has been acquired; in other words, asexual reproduction has taken place! In the case of some double monsters, this achievement of individuality has not led to such perfect results; nevertheless, the same acquirement has taken place. It appears to me that it is but an obvious and natural step from the more imperfect of the double monsters to the more highly organised teratomata. In this case the cell which has acquired an individuality has been able to produce a great variety of tissue, practically every variety that the fertilised ovum can produce, only the arrangement is so imperfect that the organism produced is quite incapable of independent existence.

Teratomata are found, as a rule, in connection with the sexual glands; when found elsewhere, they are usually, if not always, congenital. These two facts are highly suggestive. The cells of the ovary and testis, whose function is a reproductive one, might naturally be expected to make a better attempt at asexual reproduction than the somatic cells.

In congenital cases, also, we might expect to find cells capable of producing a highly organised growth, seeing that in its very earliest stage of division the ovum has cells capable of asexually reproducing a perfect fœtus. Coming lower again in the scale, we meet with the adenoma. This tumour is usually called epithelial, but I scarcely think that this is a correct view; like the teratoma, it is a composite growth, and contains mesoblastic as well as epiblastic elements; moreover, these mesoblastic elements are as integral and essential parts of the growth as are the epiblastic. Without the mesoblastic element the growth would be formed of an agglomerated mass of epithelial cells, whereas it consists of a tissue having the constituent parts arranged in an orderly and purposeful manner. This property enables these growths to subsist for an indefinite length of time, and to be little liable to inflammatory or necrotic change, being very different in this respect from the carcinomata which represent the disorderly reproduction of epiblastic elements.

Herbert Spencer has told us that evolution is progress from homogeneity to heterogeneity of structure. The adenoma attains to considerable heterogeneity, and its constituent cells, while doing nothing towards the well-being of the host, contributed each in its own way to the persistence of the new growth. The angiomata again exhibit in some instances a fairly high degree of heterogeneity.

Next in the scale we meet with growths which consist of a simple homogeneous tissue, such as fat, fibrous tissue, bone, and so forth. In these the immediate ancestry of the cells giving rise to them has so deeply impressed itself that the cells, while achieving individuality as regards their host, are compelled by their heredity to carry out the functions of their immediate ancestors. The cell which produces the teratoma succeeds in forming a great variety of tissue; that which gives rise to the adenoma can attain to much less heterogeneity, while the cell which produces the fibroma is unable to escape the narrow functional limits of its immediate ancestry.

In the malignant growths one meets with a stlll lower level of achievement. Homogeneity between cell and cell is complete—not even a tissue is formed, only a mass of cells. I regard the fibrous tissue found in cancers as owing its allegiance to the host and not to the tumour. Its formation is analogous to the formation of fibrous tissue in the known parasitic diseases. It subserves the useful function of trying to encapsule and destroy the cancer cells, and, indeed, in this attempt it attains to some degree of success. The whole question of malignancy, I believe, hinges largely on this fact, that whereas the unit of the innocent growth is a tissue, or something even higher, the unit of the malignant growth is a cell, the unit of the adenomata is an acinus, the unit of the osteoma is an Haversian system, the unit of the carcinoma or sarcoma is the single cell.

This cell independence renders any cell of the tumour capable of setting up a metastasis, whereas the cell of the innocent growth, being a part of an organic community, is unable to do so.

The formation of a malignant neoplasm has been termed a reversion of tissue to an embryonic type. Now, histologically, there may be a certain amount of truth in this idea, although even from this standpoint the resemblance is by no means so absolute as some seem to imagine. We have already seen, however, that function, and not microscopic appearance, is the real test of similarity. No embryonic tissue has any functional resemblance to these neoplasms at all. It would be as rational to define a small round-celled sarcoma as a formation composed of granulation tissue as to call it a return to embryonic tissue. The defining characteristics of the malignant cell are *indefinite multiplication and cell independence*, and no embryonic tissues possess either of these qualifications.

It will be necessary to go much further back than the human embryo to find a cell which does possess them right back, in fact, to the unicellular stage of evolution. The protozoon is capable of indefinite multiplication, and its normal condition is one of cell independence. The malignant cell has thus thrown back to its most primitive ancestor; the reversion is not autogenetic but phyllogenetic.

Last of all we may consider the case of mxed growths. I cannot quite see how those who hold the parasitic theory can attempt to explain the origin of these growths, but the reversion hypothesis can afford a possible explanation. In these cases may there not be a second reversion to a more immediate ancestry? For example, we may take the case of an osteo-sarcoma. Here we find a mingling of bony and sarcomatous elements. In this case we may suppose a bone cell to achieve independence, and to commence proliferating. Some of its descendants inherit their properties from this cell, and these form the sarcomatous elements; others revert to the immediate ancestry of the original proliferating cell, and construct bone transmitting this recovered function to their offspring. We know that this reversion to type is common enough amongst animals and plants.

The original cell possessed an inheritance from protozoic forms, urging it to indiscriminate proiferation and cell independence, and a more recent inheritance from its immediate ancestors, urging it to form bone. In some of its offspring, the remote ancestry proved predominant; in some the recent. We see something of the same struggle between remote and recent ancestral traits in the imperfect attempt made by the cells of glandular carcinoma to form acini.

Regarding, then, the subject ot neoplasm from the standpoint of the foregoing remarks, we see that the essential characteristic of the neoplasm is the escape from the domination of the organism—in other words, the acquirement of individuality. We see that in this phenomenon we have a parallel in the asexual reproduction of the lower forms of life. We see that asexual reproduction can be induced artificially in higher forms of life which normally reproduce sexually as in the case of the sea-urchin, and we see that it occurs even in man, though here found only in the very earliest stage of embryonic development. Thus the cells which produce the neoplasm and the cells which produce the embryo exhibit phenomena common to both, yet found in no other cells. Moreover, we have seen that from the reproduction of the fœtus right down to the production of the sarcoma, we have a gradually descending scale in perfection and complexity, from the fœtus to the teratoma on the one hand, and from the teratoma to the malignant growth on the other. Surely this suggests a relationship between reproduction and the formation of neoplasms.

I would venture to suggest *that tumour formation is the perverted relic of a lost ancestral function, viz., asexual reproduction.* Secondly, with regard to malignant growths, I would further venture to suggest that reversion has taken place to a remote ancestral type which possessed the characteristics of indefinite multiplication and cell independence—that is, to the protozoic stage of evolution.

Having suggested a working hypothesis, let us see if it will fit in with the known facts concerning tumour formation.

1. *Age.*—Neoplasms are most frequent in the young, in whom powers of sexual reproduction have not yet developed, and in those becoming old, in whom sexual powers are beginning to decline. This suggests a connection between the two phenomena. It seems as though the organism, not able to reproduce itself sexually, attempts to perpetuate itself by other means.

2. *Heredity.*—It is well known that any vice or fault of tissue tends to reproduce itself in the offspring, and we know also that any congenital peculiarity which in itself is a reversion to an ancestral form is hereditary.

3. *Irritation.*—Here we have two factors:
   (*a*) Simple mathematical increase in the cells produced, for irritation always causes cell proliferation. Thus the chances are increased of a cell being produced capable of acquiring individuality
   (*b*) Proliferation takes place with abnormal rapidity involving abnormal stress on cell reproductive powers, and thus increasing chances of a faulty cell.

This explains how in one case very prolonged irritation produces no cancer; in another, cancer is soon produced.

4. *Situation.*—In many cases this merely means exposure to irritation, but apart from this, certain localities seem to be in themselves particularly prone to the formation of neoplasms. Cohnheim explained this by his well-known theory of cell inclusions. If this hypothesis is correct, it in no way invalidates the previous contentions, for it does not attempt to explain why one cell inclusion gives rise to a neoplasm and a thousand do not. Indeed, one might suppose that such cells, having no function to keep their immediate ancestral traits impressed upon them, might more readily revert to more remote ancestral characteristics.

THE BLOOD IN APPENDICITIS.

By Sydney Jamieson, M.B., C.M. (Edin.), Director of Pathological Department, and Hon. Physician Sydney Hospital, and H. Skipton Stacy, M.D., Ch.M. (Syd.), Hon. Assistant Surgeon, Sydney Hospital.

This article is the result of work done in the Wards and Pathological Department of the Sydney Hospital; it deals with the histological elements only of the blood.

The manner of estimating the number of these has been described in a previous article. Counting the red corpuscles is a little tedious, and gives no information, so that it has been disregarded in most cases; the leucocyte count, however, generally gives valuable information.

Red Cells.—Practically normal.

White Cells.—In catarrhal cases the blood count is normal or sometimes slightly raised; if, however, the process goes on to suppuration or gangrene, there is usually a most marked leucocytosis, especially in gangrene. The blood count is frequently higher with a localised appendiceal abscess than with peritonitis following upon appendicitis; it is possible, however, for an appendiceal abscess to fail to cause leucocytosis, provided it is well shut off, and has existed a long time (months or more). One case is recorded in the table in which the leucocyte count was normal in spite of the fact that the appendix was gangrenous and there was peritonitis also; this resembles what occasionally happens in peritonitis (due to other causes) and pneumonia; the cases invariably terminate fatally.

No.	Age.	Sex.	Red Cells.	White Cells.	Remarks.
1	21	F	—	18,400	Perforative appendicitis, with early peritonitis (peritoneal fluid turbid, not purulent).
2	21	M	—	36,000	Localised appendiceal abscess.
			—	11,500 P.M.N., 59 per cent. L., 39 ,, E., 2 ,,	Four days after the operation, draining well. Temperature normal.
			—	13,100 P.M.N., 60 per cent. L., 40 ,,	Nine days later, still doing well.
3	22	M	6,620,000	13,300 P.M.N., 71 per cent. L., 27 ,, E., 2 ,,	Catarrhal appendicitis. Appendix removed by operation.
4A	61	M	—	18,800 P.M.N., 91 per cent. L., 9 ,,	Appendiceal abscess contained 4 to 5 oz. of pus. Extra peritoneal.
B			—	6,200 P.M.N., 60 per cent. L., 30 ,, E., 10 ,,	Some weeks after. Operation wound healed. Temperature normal.
5	—	M	—	17,800	Suppurative appendicitis.
6	24	F	—	10,400	Catarrhal appendicitis.
7	41	M	6,022,000	21,300 P.M.N., 89 per cent. L., 10 ,, E., 1 ,,	
			—	21,700	24 hours after first examination. Operated on; about ½ oz. of foul pus evacuated; not shut off.
8	9	M	—	41,500 P.M.N., 87 per cent. L., 13 ,,	The appendix was gangrenous and had perforated. Early septic peritonitis. Died about 48 hours later.
9	8	F	—	24,600	Perforative appendicitis with local peritonitis. About 3 oz. of foul pus shut off from general peritoneal cavity. Ill 3 to 4 days.
10A	25	F	—	5,700	
B			—	15,500 P.M.N., 69·5 per cent. L., 30 ,, E., 5 ,,	Five weeks later. Some abdominal distension. Abdominal section: Appendix full of hard concretions. No peritonitis.
11	—	M	—	24,400	Extra peritoneal abscess. Contained about 10 or 12 oz. of pus (streptococcal).
12	12	M	—	16,600 P.M.N., 87 per cent. L., 12 ,, E., 1 ,,	Appendicitis. Rigor previous evening.
13A	22	M	—	36,200	Illness began two days previously with a rigor.
B			—	14,000	Six days later. Temperature normal. Not operated on. Large mass in right iliac region.
14A	48	M	—	6,800	Ill 8 days. Temperature, 104°.
B			—	12,800	Seven days later. Temperature normal. Catarrhal appendicitis.
15	39	M	—	17,700	Pus present.
16	41	M	—	16,200	Appendiceal abscess well shut off.
17	42	F	—	28,000	Large appendiceal abscess.
18	32	M	—	17,900	Appendiceal abscess (also had incarcerated hernia).
19	15	M	—	40,000	Appendix gangrenous. Slight peritonitis.
20	19	M	—	39,000	Appendiceal abscess. Appendix gangrenous.
21	22	M	—	24,800	Perforative appendicitis, with some localised peritonitis.
22A	15	M	—	28,200	Appendiceal abscess.
B			—	22,600	Two days later.
C			—	24,600	Three days later. Blood taken 24 hours after the abscess had been opened and drained.
D			—	13,500	Three weeks later. Temperature normal. Wound almost healed.
23	29	M	—	11,300	Catarrhal. Numerous adhesions.
24	50	M	—	7,100	Gangrenous appendicitis; appendiceal abscess with 5 or 6 oz. of pus, but cut off from the general peritoneal cavity. Also early peritonitis. Blood examined 14 hours before death.

DIAGNOSTIC VALUE.

The leucocyte count will in most cases distinguish between a *catarrhal* and a *suppurative* or *gangrenous* appendicitis, but marked leucocytosis does not necessarily indicate immediate operation, for many of the localised abscesses give some of the highest counts. With the subsidence of the symptoms the leucocytosis generally falls.

Typhoid very seldom causes leucocytosis.

Constipation.—No leucocytosis.

Gallstones (if unaccompanied by suppurative cholecystitis or cholangitis) are not accompanied by leucocytosis.

Calculi.—Renal and vesical give a normal blood count when the genito-urinary passages are healthy, but if there is suppuration of these there will be leucocytosis.

Peritonitis, due to appendicitis, hæmatologically resembles peritonitis due to other causes, except that due to intestinal obstruction, which is not usually so high.

Intestinal Obstruction.—This, as a rule, does not raise the blood count except it be complicated with ulceration or gangrene, or due to cancer.

Pyo-salpinx resembles appendicitis, sometimes raising the leucocyte count; sometimes not affecting it.

Floating kidney has no effect on the blood.

Extra uterine pregnancy generally causes a slight or a considerable leucocytosis, according as it is old or recent.

AN UNUSUAL ACCIDENT TO A FIBROID TUMOUR OF UTERUS COMPLICATING PREGNANCY.

By J. A. G. Hamilton, M.B., Hon. Gynæcologist, Adelaide Hospital, Lecturer on Gynæcology, Adelaide University.

As papers have been invited to-night on some unusual complications in pregnancy, I thought a few notes on an interesting and uncommon accident which happened to a fibroma of uterus, after delivery, might interest this meeting.

Of course we have all met with cases where the presence of a fibroid tumour or tumours of the uterus have caused serious complications in pregnancy; but I have never met with a case in which a fibroid has behaved as it did in this case, nor can I find any record of such an accident in the literature on the subject.

Dr. Scott, who attended the patient in her confinement, has kindly furnished me with the following notes of the case :—

Mrs. C., 5-para, *æt.* 36, consulted me for the first time on August 4th, 1903, on account of two round hard masses which she felt in lower part of abdomen, and which lately had become more prominent. On examination it was found that the patient was about 10 weeks pregnant and had two fibroids, about the size of a tennis ball, attached to and springing from the uterus, near the fundus ; the fibroids were movable on uterus, evidently sub-peritoneal, and pedunculated (one particularly), and it was only by the pregnant uterus pushing them forward the patient had become aware of their existence. Dr. Gault saw patient a few days later, and we agreed that the fibroids, from their size and position, would, in all probability, not interfere with delivery, so we advised patient to allow pregnancy to proceed ; saw patient several times at about monthly intervals, and tumour did not appear to be increasing much in size.

On February 26th, 1904, at 11 a.m., I saw patient, who was then in the first stages of labour ; os about size of a half-crown ; head presenting. At 4 p.m. I was again sent for. Not wishing to allow patient to be too long in labour, and as os was fully dilated, I administered a little A.E.Q., applied forceps, and delivered child without any difficulty. After a little delay, hand was introduced to bring away placenta. I purposely avoided much manipulation of the uterus by Crede's method, on account of the presence of the fibroids. The uterus contracted well, and patient's condition was in every way satisfactory.

I saw her next morning, the 27th, when pulse was 70, temperature normal, uterine contraction good. Patient described herself as feeling very well, indeed. At 8.45 p.m. on the same day I got a telephone message "to come at once, as patient was sinking." On arrival, I found patient very much collapsed, blanched ; pulse very small and quick. On enquiry, I found patient, whilst making a slight movement in bed, had sensation of something "giving way" in right side, accompanied by a sharp pain, which made her cry out. Collapse immediately followed. Her condition pointed to a severe hæmorrhage. An examination quickly showed it was not from the uterus or vagina. On examining the abdomen, it was found somewhat distended, with a dulness and a fluctuating mass in right flank, which pointed to the hæmorrhage being intra-abdominal. 1-20th grain of strychnine hypodermically or a quart of warm saline injected into the rectum did not seem to revive her, and I returned home for a transfusion apparatus. Dr. Gault accompanied me back, and we injected more strychnine and normal saline solution subcutaneously. Drew off urine about a pint, which was healthy and free from blood. The fluctuating mass in right flank was now very evident, coming across middle line, and nearly level with umbilicus, and I was quite satisfied it was larger than an hour previously. Pulse was over 140, and woman was much worse. At 12.30 a.m. I telephoned for Dr. J. A. G. Hamilton, who kindly came out promptly.

On arrival, I found patient pale and collapsed ; pulse ranging between 140 and 150. There had evidently been a big hæmorrhage from somewhere. A careful examination showed that the uterus was not the source of bleeding. On examination, the abdomen was found considerably distended. (Drs. Gault and Scott had noticed that the distension had increased very much since they first saw her.) On palpation, the front of abdomen was tympanitic ; there was a dulness in right flank, extending more than half way between anterior sup. spine and umbilicus, There was also some dulness in left flank, but not extending so high. The uterus could be felt extending about halfway between symphisis and umbilicus, and on its upper surface two hard, movable tumours, each about the size of a tennis ball, could be felt. A vaginal examination did not disclose any bulging in the pouch of Douglas, or in either fornix. Various theories suggested themselves to us as the cause of her sudden collapse ; but her condition and other circumstances were against operative interference, so we determined to stimulate further and await events.

Dr. Scott's report goes on to say : " During Sunday, 28th, the pulse varied from 120 to 140, but was somewhat better in volume. Temperature went up to 99°, respiration quiet, and patient quite clear mentally. Strychnine had been kept up regularly every four hours. At 6 p.m. there was a slight vomiting. At 10 p.m. Dr. Gault saw patient with me ; vomiting was worse, so we gave $\frac{1}{6}$ gr. of morphia, and $\frac{1}{30}$ gr. of strychnine hypodermically. Vomiting continued at intervals all night, and distension of abdomen increased. At 8 a.m. on Monday, 29th, patient was very low, indeed. An enema of soap and water, given on Sunday evening and another on Monday morning, had no effect. No motions or flaccus had been passed for over 24 hours. No peristalsis of bowel could be heard with stethescope. It was evident that nothing but an abdominal section could save the patient's life, and Dr. Hamilton, who again saw the patient with me at 11 a.m., shared that opinion, and was willing to perform the operation, although the chances seemed to be of the slenderest imaginable. The patient was accordingly removed to a private hospital, and operation performed on Monday, 29th, at 4 p.m."

When I saw the patient on the morning of Monday, the 29th, her condition was bad in the extreme. Pulse, 150 to 160, fuller than tympanitic in front, and dull in flanks, especially right, very tender all over. There was evidently some peritonitis present. I advised an exploration of the abdomen as the only chance, but did not face it with any great hope of saving the patient's life. When the abdomen was opened, there was a gush of some pints of dark blood, just as in a ruptured tubal gestation. A clip was immediately placed on each ovarian ; the uterus presented in the wound, and on its upper surface two subperitoneal fibroids were found. On examining these, blood was seen to be coming from a valve-like opening in a large vein in the capsule of the fibroid, on the right side of the fundus. The two fibroids were quickly enucleated, and the bed where they lay closed up with a few deep and superficial catgut sutures. The abdomen was washed out with hot saline solution, —many quarts of water were used ; all the blood and clots were washed out, especially from the renal fossæ and subphrenic regions behind the cervix and spleen ; the abdominal wall was closed in the usual way with larger sutures. The operation itself only lasted a few minutes. The washing out of abdomen, however, took some time ; but the flooding of the peritoneum with very hot saline appeared to improve her Her condition was no worse than when she was on the table, although her pulse was 160. She was stimulated with strychnine, normal saline injections of rectal injections of saline and brandy. That evening her condition was somewhat improved. Pulse still 150 but of better volume ; temperature, 101·4° ; abdomen less distended. On the next morning her pulse was 120; temperature normal; general condition much improved. Four grains of calomel, in hourly doses, followed by a high enema, gave a good action of bowels. From this on she made steady progress towards recovery. Her pulse went down below 100 on the fourth day, and temperature practically remained normal. She left the private hospital on Monday last, a month after the operation, feeling comparatively well. From an examination of the fibroids afterwards, it can be easily seen what had happened. A piece of omentum had become adhered to a large thin-walled vein in the capsule of one of the uterine fibroids. As the uterus contracted after delivery, this adhesion dragged upon, the thin-walled vein gave way, and a valve-like opening was formed, which allowed the bleeding to occur. (The specimen was here shown.) A small tag of omentum can be seen attached to the opening in the vein. It was either torn off by the uterine contraction, or possibly, unconsciously by manipulation at the operation. It is easy to understand how this accident may occur in pregnancy complicated by fibroids, and possibly it has occurred in other cases, without an opportunity being obtained of demonstrating the fact.

There is another interesting feature about this case. She is the fourth member of a family on whom I have operated on for uterine myomata—an aunt and two cousins. Six members of the family have been similarly affected—her mother, two maternal aunts, and two cousins, daughters of her mother's brothers.

(Read before the Adelaide Branch of the British Medical Association.)

THE TREATMENT OF A CASE OF ANEURISM OF THE TRANSVERSE AORTA.

By Louis Henry, M.D., Assistant Honorary Physician to the Alfred Hospital, Melbourne.

In the October number of 1903 I described in the *Australasian Medical Gazette* a case of aneurism of the transverse aorta which ended fatally. The patient was a man of 67 years of age, with a large tumour about the size of a large orange, beginning at the second intercostal protuberance of the sternum, with erosions of the sternum and ribs, extending to the third left interspace. As I dealt in this paper exhaustively with both the physiology and pathology of aneurism, I intend to limit my remarks in the present instance to the treatment alone. In a paragraph in which I summed up my conclusions on treatment, I wrote: "I find iodide of potassium in advanced cases of no apparent benefit." I have since had good reasons, as you will be able to judge for yourselves presently, to considerably modify this opinion, as the result of treatment in the case which I am exhibiting to you this evening.

The patient, W.S., *æt.* 48, presented himself to me for treatment on July 7th, 1903. He was born in Renfrew, in Scotland, and is a marine stoker by occupation He has travelled a great deal, principally in hot climates. He contracted syphilis in 1886. In 1894 he had a bubo while in India, and was subsequently treated for it in Greenwich Hospital. While in London in August, 1902, he felt a sharp acute pain in the chest, accompanied by an occasional hollow cough, with no expectoration. Ascribing it to indigestion, he gave it no further attention. He shipped to Melbourne, and while at sea he felt well. A few days after arrival here the symptoms returned, and he went on to Sydney, and attended the Sydney Hospital. He then went on to Western Australia and to Adelaide. He had several fainting attacks on board, and was declared unfit for duty, and on returning to Melbourne was paid off. He then attended the Melbourne Hospital as an out-patient for about six weeks, and was then admitted as an in-patient for five weeks, and confined to bed the whole of that time. Upon his discharge he was sent to a convalescent home for a fortnight, and then came under my care. His weight was then 10 st. 9 lb.; his height is 5 ft. 6½ in.; and chest circumference at nipple line, 37 inches. His voice is husky, without any *timbre*. The inspection of the chest discloses an elevation over the upper portion of the sternum, extending from the second intercostal to the third, and about the size of half an orange. This elevation feels hard, and vibrates tremorously beneath the hand. On auscultation the valvular tones are unaffected, but there is a bursting sound transmitted all over the heart region, and slight accentuations of the second aortic sound, and tracheal tugging is distinct. Examination with the laryngoscope reveals paralysis of the left vocal cord as the result probably of pressure on the left laryngeal recurrent nerve. His temperature is normal; pulse, 96; respiration, 18. Urine—Quantity, 75 ounces; 1012 specific gravity; sugar and albumen absent.

Through the courtesy of Dr. Amess, Superintendent of the Melbourne Hospital, I have been supplied with the following notes :—

"W.S., aged 48, marine fireman, admitted May 5th, 1903. Complains of great pains right through from sternum to back, which also runs down the left arm as far as the elbow, and sometimes shooting up the back of the hand. Sometimes dull pain in frontal region, and is practically never free from pain. Pulse 72, normal.

Circulation.—Feeling of tightness in chest, especially on exertion; dyspnœa and palpitation on exertion ; pulse equal on both sides ; tension not high ; artery palpable ; no œdema ; has fallen down unconscious and remained so for a few minutes. Dilated veins on upper left chest, and just to the left of the upper end of the sternum there is a distinct projection which pulsates synchronousy with the pulse ; tracheal tugging ; over area of projection there is marked dulness ; apex beat not palpable, but heart sounds best heard just inside nipple line. No limits detected. In both pulmonic and aortic areas the second sound is dull and thudding, and can be readily heard over site of projection ; first sound not heard.

Respiration.—Cough for six to seven weeks ; voice hoarse, almost lost. Lost voice suddenly seven to eight weeks ago during one of the unconscious attacks. No adventitious sounds in lungs, but in left side there is diminution of vesicular murmurs, most marked at upper and posterior part of lungs.

Renal.—Sometimes nocturnal micturition.

Alimentary.—Tongue somewhat flabby ; difficulty in swallowing, and refers site of difficulty to region of prominence in chest ; no vomiting ; bowels open.

Personal.—Hard manual labour for last ten years without break as fireman. Hard chancre 17 to 18 years ago, treated only for a couple of months, followed by rash and sore throat.

Alcoholic History.—Treatment : Pot. iod., grs. 10, twice daily.

6-5-03.—Pain in head ; temp. 102·6° ; cough and increased dyspnœa.

13-5-03. Pain in head still ; temp. 102·8° ; has sore throat—pharyngitis and tonsillitis ; 9 oz. pot. chlor.

18-5-03.—Pulsation over tumour less evident.

10-6-03.—Discharged much relieved."

I placed the patient in bed and ordered the following diet :—

Breakfast—	Bread and butter,	6 oz. ;	milk,	6 oz.
Dinner	Meat or fish,	4 oz. ; .		
,,	Bread and butter	4 oz. ;	,,	8 oz.
Supper	Bread and butter	6 oz. ;	,,	6 oz.
		—		—
Total		20 oz.		20 oz.

Medicinally a mixture containing 20 grains of iodide of potasium three times a day.

Eight days later, on the 14th of July, the dose of iodide was increased to 30 grains.

Towards the end of August the diet was gradually reduced to 10 ozs. of solids and 10 oz. of liquids in the 24 hours, and the iodide gradually increased from 90 grains a day until November 16th, when it reached 150 grains a day ; the quantity was still further increased until in December, when he was taking 210 grains a day. The total quantity of iodide taken up to January 9th was 29 oz. 180 grains. By this time the projection on the sternum and the throbbing had disappeared, and the large doses of iodide were slowly reduced until after about three weeks he was taking 10 grains three times a day. His food total was increased, and it was found that his body weight had not materially suffered. His subjective symptoms of pain and distress have left him, and he is able to move about and make himself useful in the ward. I have refrained from embodying the voluminous notes of his case in this report. The results of this treatment have been very remarkable and gratifying.

The action of iodide of potassium is to lower blood pressure and promote diuresis, and this has a tendency to inspissate the blood and to contract the aneurismal sac. Some specific action may also operate on a latent syphilitic endarteritis. Examination of the heart at present makes it appear as normal. There are no accentuations of sounds. The first sound is heard distinctly, and there are no murmurs or adventitious sounds. The apex is not clearly definable, but appears to be slightly within the nipple line. There is very slight arterial tension. I have endeavoured to auscultate the brachial artery, but have not been able to obtain any additional information by doing so. The hoarseness, although slighter, still persists.

SUBURBAN OPENING WANTED by M.B.,Ch.M., with nine years' experience in large country practice. Govt. Medical Officer and Surgeon to Hospital. Partnership preferred. "A," office of *Australasian Medical Gazette*, 121 Bathurst Street, Sydney.
F

CLINICAL AND PATHOLOGICAL NOTE.

THE POSTURAL TREATMENT OF MOVABLE KIDNEY.

It has been said by a German surgeon that six out of every ten thin women have "Wanderniere," and in my experience of this disease, I am inclined to think that dictum is not beyond the mark, and that it is true to a less extent in the case of thin men. It is surprising to find in a systematic examination of patients, male and female, who come to your consulting rooms for vague symptoms of dyspepsia, and general neurotic disturbance, how many suffer from a laxity of retroperitoneum and nephroptosis. In a series of 19 cases all seen within the last 18 months in Auckland, I have noticed the symptom of hyperidrosis in three cases, while in five the sensations compained of were similar to those of seasickness or dilated stomach.

One fact should clearly be borne in mind, viz., that the symptoms of movable kidney are due to the erect position man assumes in his daily walk in life, and that were it possible for him to do all his ordinary duties with the thorax some two feet lower than the pelvis, the symptoms would not exist. It is purely a matter of the position of the body. I would also point out that if you place your patient in that position when he comes to see you, you will be surprised at the comfort and ease experienced by the sufferer, who in the erect position was a picture of what Treves calls "flabby woe."

One must, of course, remember that other structures besides kidneys (as Professor Ewald once remarked to me in his clinic at Berlin in 1894) may be in abnormal positions in the abdomen. In a recent case I found that the liver was also very low down, and freely movable, so I had first to fix it up as high as possible, and after that secured the right kidney in its place ; the latter being possible only when the former could no longer act as a depressor.

Since writing the above I noticed a valuable paper in another journal[*] on the operation for fixing movable kidneys, in which the author lays stress on the adoption of the Trendelenberg position in and after the operation, and the use of temporary ligatures to hold the kidney in its socket before applying the fixation ligatures. The Trendelenberg position has been used by me for many years past, but I *remove* the folded resected part of the kidney capsule.

G. Gore Gillon, M.D., F.R.C.S.E.
Auckland, N.Z.

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[*] By Dr. W. E. Collins, Wellington, New Zealand, in the *New Zealand Medical Journal*, December, 19 3.

REVIEWS AND NOTICES OF BOOKS.

The Physiognomy of Mental Diseases and Degeneracy. By James Shaw, M.D. Bristol: John Wright & Co. 1903.

Dr. Shaw, whose "Epitome of Mental Diseases" is well and favourably known, has in his new book, "The Physiognomy of Mental Diseases and Degeneracy," given an excellent view of the various outward and visible peculiarities likely to be met with among the insane and the degenerate. The chapters are somewhat unequal in value, and undue importance would seem to be attached to the attitude adopted by the victims of the various forms of mental disorder. The necessarily short descriptions of the morbid mental states are good and well placed. With regard to the other matter, exception must be taken, however, to the photographs, which, though clear and well reproduced in the main, do not convey any adequate or satisfactory impressions of the types intended. Those representing idiocy and degeneracy are the least misleading.. On the whole, Dr. Shaw is to be congratulated upon supplying a valuable contribution towards an interesting and difficult subject. C.R.

The American Text-Book of Obstetrics. Second edition, thoroughly revised and enlarged. Edited by Richard C. Norris, M.D.; Art editor, Robert L. Dickinson, M.D. Two volumes. Price, 32s 6d. Philadelphia: W. B. Saunders & Co. Melbourne: James Little.

We are informed in the preface that the "especial design" in preparing these volumes was "to make clear those departments of obstetrics that are at once so important and usually so obscure to the medical student." This design is no doubt good, but to call it *especial* is a little egotistical, as it would imply that obscurity has been generally the result, if not the actual aim, of other works on the subject of obstetrics. This by the way, however.

The writers are American obstetricians of eminence. The phenomena and the mechanics of labour, normal and abnormal, the manipulations of obstetric surgery. the management of emergencies, are all described at great length. There is a profusion of illustration, and if this seems in one or two instances overdone, it is a failing on virtue's side. Some of the plates, *e.g.*, that of diphtheritic endometritis, are very well reproduced. Most of the illustrations have the advantage of being drawn to a uniform scale.

The method of sectional authorship carries with it some drawbacks. There is thus a good deal of overlapping and repetition ; thus we find lacerations of the perineum treated of in both volumes.

The section on the Mechanism of Labour is lucid and well written, also the short chapter on the Physiology of Labour. Considerable space is devoted to the important subject of abdominal palpation, and its value is highly rated: "With all the facts clearly made out, it will readily be seen that the abdominal examination is of more value for the diagnosis of presentation of position of the fœtus than the vaginal touch."

Certain questionable theses are too confidently put forward. It is stated, for example, that the structural development of the growing fœtus may be affected, modified, or perverted by psychical influences; that certain fœtal disorders may result from maternal impressions; that "monstrosities do at times so occur."

The section on the Pathology of Pregnancy is somewhat disappointing; it is statistical to a degree, and dull in consequence. In the treatment of eclampsia the writer relies for control of the convulsions chiefly on injections of veratrum viride; chloral is the second in value; while morphine is mentioned only to be condemned, being hurried out of audience in company with pilocarpin, bleeding, and prolonged anæsthesia. Rapid emptying of the uterus in the absence of labour pains the author cannot recommend; in this we are unable to agree with him. The same operation is allowed in cases in which labour has commenced; it is added, however, that Cæsarean section should rather be the alternative "when the circumstances are favourable and the cervix cannot readily be opened." It is our own experience that the os uteri seldom resists dilatation in eclamptic cases; and we think the safe delivery of a fœtus, which will probably die soon, is insufficient amends to either the patient or the surgeon for the hazard of abdominal section, which is shown by the figures quoted to have in these cases a high mortality. In offering these criticisms we are not forgetful of the industry and ability to which this article gives witness.

In the section on Obstetric Surgery the operations are well described, symphysiotomy in suitable cases being strongly recommended; any trouble supervening on the operation being put down to "crude surgery" rather than to any disadvantage in the operation itself. The puerperium receives full treatment, and this section is specially valuable.

The whole result is highly creditable to the industry and research of the authors; we have a splendid work of reference, and it reflects honour on the country from which it comes to us. The publishers' part is excellently done; the two handsome imperial octavo volumes contain each about 600 pages; there are nearly 600 illustrations and 49 coloured and half-tone plates.

A.W.M.

A Non-Surgical Treatise on Diseases of the Prostate Gland and Adnexa. By G. W. Overall, M.D. From the Rowe Publishing Company, Chicago. Price, 8s 6d, cloth.

In this book the author endeavours to point out that most of the diseases of the prostate and the adnexa may be successfully treated by means of electrolysis and cataphoresis. He apparently has great faith in some of his methods, and so must his patients, for the treatment by means of rectal and urethral applications lasts for very many months, and reminds one of the gynæcology of a few years back, when, as Clifford Allbutt remarked, "The cervix was painted red and mounted on a stick, while the medical attendant went away grouse shooting." We may quote a sentence: "The medicines as used in connection therewith aid in the reduction of the existing inflammation, and decomposing the abnormal products, that form as result of unnatural growth of the parts." It is only a certain type of mind which can appreciate this book, and to that type we strongly recommend it. H.C.H.

The Sterilisation of Urethral Instruments and their use in some Urinary Complaints. By Herbert T. Herring, M.R.C.S. London: H. K. Lewis. Price, 5s net.

This book aims at teaching the practitioner and through him the patient the great importance of asepsis in the treatment of urinary conditions. The methods recommended for the sterilisation of catheters are extremely good, but unfortunately require special apparatus. In order to obtain the universal adoption of aseptic and antiseptic methods, those methods must be made easy.

The care of the patient who needs catheterisation is fully dealt with, as well as many of the minor details associated with bladder and urethral troubles. The author is certainly wrong in representing that an old man is recommended to submit to surgical treatment for the removal of an hypertrophied prostate in order to escape the tedium of a catheter life. Unfortunately there are very few who can get along comfortably by passing a catheter four or five times in the twenty-four hours, nor can any man pass a catheter on himself or anyone else and maintain the absolute sterility of the bladder. Apart from the pain and irritation caused by frequently passing a catheter are the dangers of bladder infection, of kidney infection, and also of malignant disease of the prostate, a complication which is far more common than most people imagine.

On the whole the book is one which can be well recommended. It will prove to be a useful guide in all those minor matters of major importance which are not dealt with in the ordinary text-books. H.C.H.

Aids to Physiology. By Peyton T. B. Beale, F.R.C.S. (Eng.). London: Baillière, Tindall and Cox. Sydney: L. Bruck.

This little book will no doubt fulfil the purpose set out in the preface, of an aid to the student and of a refresher to the memory of the practitioner. It, of course, has the faults common to such small books of being difficult to the junior and not full enough for the senior student.

An increase in the number of illustrations would be an improvement without adding materially to the size of the book. Amongst minor mistakes, misprints, etc., may be mentioned the following:—On page 57 the "history of the coloured and colourless corpuscles" makes no mention of the latter. On page 87 some of the figures given are incorrect. The cæcum is usually completely, not partially, covered by peritoneum. On page 187 wrongly-placed punctuation produces confusion between perilymph and endolymph. On the whole, however, this little book is up to date, and can be confidently recommended for the purposes given in the preface. A.A.P.

Pathological Technique. By F. B. Mallory, M.D., and J. W. Wright, M.D. Second edition. Philadelphia: W. B. Saunders & Co. Melbourne: James Little. Price, 15s.

The appearance of a second edition of this well-known work, four years after the first edition was launched, is of itself proof of its acceptability to the members of the profession. It will be found to be a very useful guide to the student and practitioner alike in those methods of pathological and clinical research which form so important a feature of the work of the modern physician. The book is well written, admirably printed and copiously illustrated, and can be strongly recommended.

S.J.

THE AUSTRALASIAN
MEDICAL GAZETTE.

SYDNEY, 20TH APRIL, 1904.

THE BALMAIN HOSPITAL DISPUTE.

THE present position of affairs at the Balmain Cottage Hospital is not one which can be viewed with equanimity by any one of the parties concerned, and we deeply regret that such a crisis should have occurred. It is no part of the policy of the British Medical Association to be inhumane, notwithstanding that such a charge has been hurled against the profession, and especially against the British Medical Association, in connection with this dispute.

The trouble arose in the first place in connection with the recent alterations in the rate of remuneration paid to the medical officers of the Balmain United Friendly Societies' Dispensary. The terms and conditions of work offered were such as to meet with the disapproval of the British Medical Association, and the medical officers who accepted the positions did so with a full knowledge of the probable consequences of their actions. At a meeting of the Balmain Hospital Committee in February last, one of the medical officers of the Balmain Dispensary was elected paid medical officer to the hospital, in spite of the warnings uttered by Drs. Carruthers and Davidson, that such an appointment could not be approved by the local Medical Association, and that trouble would inevitably arise if the committee persisted in their line of action. The warning was ignored, and the Balmain Hospital Committee have only themselves to blame for having created a situation which cannot be maintained without serious detriment to the utility of the hospital and the welfare of the patients. If the local medical men decline to act as medical officers to the hospital, it is quite certain that no outside medical man will be induced to settle in the district on the strength of an honorary post at the district hospital. If the hospital committee are counting upon the Dispensary medical officers taking up the duties of medical officers to the hospital in addition, they will have to reckon with the Balmain Dispensary authorities, for it is quite certain that the three medical officers to the Dispensary cannot discharge the duties attached to the Dispensary and the Hospital with anything like satisfaction to either committee or to the patients.

The difficulty has arisen in part from a defect in the constitution of the hospital committee. No hospital can be satisfactorily conducted without full harmony in working and in policy between the Committee of Management or Board of Directors and the Honorary Medical Staff, and to secure this end it is necessary in every hospital to have one or more members of the honorary medical staff as direct official representatives of that body on the Committee of Management. By this means the fullest interchange of views on all matters affecting the strictly professional side of the work of the hospital will be obtained. The absence of direct representatives of the medical staff on the Committee of Management has been the cause of some serious hospital disputes, and will be the cause of similar disputes in the future wherever this defect in the constitution of the hospital board of management is allowed to remain.

We would respectfully urge the Balmain Hospital Committee to take steps to amend their constitution in this direction, and as a solution of the present difficulty, we would suggest the abolition of the position of paid medical officer and the appointment of a resident medical officer who would be able to devote his whole time and attention to the hospital patients, and be of great service to the honorary medical staff in their treatment of both indoor and outdoor patients. Under the most favourable circumstances the present arrangement of having one medical man, who, outside the hospital, is on an equal footing with the other practitioners in the district, as paid medical officer, cannot be worked with full satisfaction to all parties.

THE PASSING OF QUARANTINE.

With the occasional epidemics of infectious diseases in the different Australian States we have the usual outcry against the hardships inflicted upon ships' passengers and crews under the quarantine regulations. The recent outbreak of smallpox in New Zealand was no different to others in this respect, and the enforcement of the quarantine regulations on some of the poorer class of passengers arriving from New Zealand at Hobart and the other Australian cities involved real hardship. While, however, these hardships may be genuine, we must remember that still greater hardship would be inflicted upon a larger number of persons if the introduction of a single case of smallpox were to lead to an extensive outbreak of the disease in an unvaccinated community.

It would appear from the recent trend of events in Europe that the old practice of quarantine is likely to pass away in the near future. The convention adopted by the International Sanitary Conference, held in Paris last December, has been signed by the representatives of 20 Powers, including all the chief European States, Egypt, Persia, and the United States of America. Under this convention all land quarantine has been abolished; only those persons actually suffering from symptoms of plague or cholera can be detained on the frontiers of any country which has agreed to the convention. The period of quarantine for ships infected with plague has been reduced to five days. The sick are taken on shore and isolated; the remaining passengers and crew may be isolated for a period not exceeding five days, and then granted full pratique; or they may be simply subjected to medical supervision for a period not exceeding ten days. The tendency is thus to rely more upon medical inspection at the port; the separation of the sick from the healthy; the setting free of the latter at once under some provision for medical supervision for a certain period; and lastly, the complete disinfection of the vessel, with destruction of all rats in case of plague infection, as soon as possible after arrival in port.

Two totally different complaints have been made in regard to the medical inspection of passengers and crews of vessels arriving from infected ports. One complaint is that the usual inspection by the port health officer is so perfunctory, and the regulations observed so inconsistent, that this inspection, as a means of preventing the introduction of infectious diseases, is absolutely useless. The other complaint is over the large amount of time wasted in the medical inspection, and the unnecessary delay occasioned to passengers landing. We have no doubt that a case of bubonic plague may be so mild as to escape detection by a perfunctory medical examination; but in view of our present knowledge of this disease, probably no great harm would result to the general public if such did happen. But it would be quite another matter if a mild case of smallpox escaped detection by the medical officers, since we know how extremely infectious this disease is. Hence we cannot blame, but rather commend the health officers, if they do take every precaution against the possibility of the introduction of smallpox, and in so doing, perhaps, cause considerable delay and inconvenience to individual passengers.

It is a matter of congratulation that, with the great advances made in sanitary science in recent years, and the ready adaptation of scientific knowledge to practical sanitation, our second line of defence against the invasion of infectious diseases has been considerably strengthened. We now, for example, wage incessant war against rats because we know both scientifically and practically that with the infection of rats by plague bacilli, we find an outbreak of this disease among human beings. We now, also, pay great attention to our food supplies, to drainage, sewerage, etc., and thus strive to maintain a good public health. Yet in spite of the efforts of our sanitary authorities, a large number of persons selfishly neglect the simple practice of vaccination, and are ready to find fault with rules and regulations made in the interest of the public health.

The passing of quarantine can only be effected by rendering our second line of defence absolutely impregnable, and by the universal adoption of those sanitary laws and practices which experience has taught us to be the chief safeguards against infectious disease. Until this is fully accomplished we must be prepared to submit to some inconvenience in the careful and prolonged medical inspection of persons arriving by sea from ports infected with epidemic disease.

THE MONTH.

The British Medical Association and the A.N.A.

THE A.N.A. has been holding its annual session in Sydney this month, and, after some highly complimentary remarks from the president about the New South Wales Branch of the British Medical Association, a resolution was passed that " this session is of opinion that a Royal Commission should be appointed to inquire into the arrangement of the medical profession and friendly societies generally ! " This is sufficient to show to what dire straits this patriotic association has been driven by the refusal of the B.M.A. to recognise it as an association having any claim whatever upon the charity of the medical profession. We have told the A.N.A. that we will not have them on any terms or at any price, and this decision has only been recently re-affirmed by the B.M.A. To talk of a Royal Commission to inquire into the relations of the profession and friendly societies is to show entire ignorance of the reasons for which medical men agree to attend members of friendly societies at reduced rates. And if the A.N.A. think that they will try and compel medical men to do by law what they now do as a purely gratuitous service, they will find themselves much mistaken ; and they will further incur the wrath of the friendly societies if they disturb the present harmonious relations between the societies and the medical profession. The profession has always been ready to give its services to relieve the sufferings of the sick poor belonging to these societies ; but it has not, at least in New South Wales, ever agreed, or ever will agree, to give its services to bolster up a political organisation which cannot get on without a "draw" in the shape of cheap medical attendance.

The New South Wales Medical Union.

We publish in another column the annual report of this Association, presented to the meeting held this month. It is, perhaps, the most important report yet furnished to the members of the Union, and should furnish food for reflection for all members of the profession who have hitherto neglected to join this Union. During the past year four medical men have been drawn into or threatened with legal actions arising from the practice of their profession, and no less a sum than £270 has been paid by the Union in legal expenses incurred in defending these proceedings. The individual medical men have thus been saved heavy expenses by virtue of their membership of the New South Wales Medical Union. As a contrast to this, we have at the present time a medical practitioner who has been obliged to retire from active practice in consequence of ill-health, served with a writ for £5000 damages for alleged neglect in the treatment of a fractured leg. The plaintiff has no money, and the medical practitioner neglected to join the Medical Union. Hence, even under the most favourable circumstances, the unfortunate medical man will have to pay away a large sum of money in defending the action. Could any case illustrate more forcibly the folly of any medical man neglecting to join a medical defence union ? We would appeal to every medical practitioner to join a medical defence union at once, as he may at any moment become involved in some case which will take him into the law courts, and involve him in heavy legal expenses. If he become a member of the Medical Union, he secures the moral and financial support of the Union if he be called upon to defend himself in any action at law arising out of the practice of his profession. Write at once honorary secretary of the New South Wales Medical Union, 121 Bathurst-street, Sydney ; or to the secretaries of the medical defence unions in the other States.

Sweating the Profession.

It may be interesting to our readers, as well as to the general public, to know that the complaints which have been made from time to time as to the sweating of the profession by certain wealthy members of medical benefit societies are not pure fiction. We have been informed on good authority that one of the members of the Federal Ministry, whose wife is a wealthy woman, takes advantage of the services of the medical officer of an Oddfellows' lodge, of which he happens to be a member, for himself and family. This is not the first or only occasion in which a Cabinet Minister has availed himself of the services of the lodge doctor, but we should have thought a Federal Minister would have had more self-respect and dignity than to get medical attendance on the cheap because he happened to be a member of a friendly society. We live and learn, but do not grow in respect for our Federal legislators.

The Declining Birth Rate.

The report of the Royal Commission on the Decline of the Birth Rate in New South Wales has aroused a considerable amount of interest all over Australasia, and the different States are beginning to seriously consider the question as it affects their own population. The Medical Officer of Health for Adelaide, Dr. Borthwick, has reported to the City Council that during the last five years the birth rate of Adelaide has declined from 27·72 to 22·28. This falling off has meant a shortage of over 500 to the population. Concerning infant mortality, Dr. Borthwick states that in 1898-99 out of every 100 children born 17·2 died under one year, and during the succeeding four years the number averaged about 14 per cent. The chief causes of mortality are diseases arising from insanitary conditions and from food supply of infants.

The Queensland Birth-rate.

During 43 years between 1860 and 1902 the birth-rate in Queensland is stated to have fallen from 47·9 per 1000 to 27·7. The birth and marriage rates have both been highest in periods when immigration was most active. Dr. Ham, the Public Health Commissioner, has formed the opinion that the chief factor in the decline of the birth-rate has been the restrictions placed upon immigration and the practical discontinuance of immigration. He says if 5000 or 6000 people come into the State it is reasonable to suppose that the majority of those who are marriageable will marry. Another great factor is the large proportion of young men at marriageable age who do not marry. That is mainly an economic question. The use of preventives was not so important a factor in reducing the legitimate increase as some people supposed. He was of the opinion "that the best remedy for a decreasing birth-rate was the encouragement of a desirable class of immigrants, and the adoption of a system under which immigrants would be induced to find homes for themselves on the land."

The Melbourne University Finances.

A deputation from the Melbourne University Council waited upon the Premier (Mr. Bent) recently to ask for temporary assistance from the Government. The deputation, which interviewed the Premier in private, submitted a memo. showing it was impossible to carry on the University after this year under existing conditions, even with the present curtailed staff and reduced expenditure, and the continuation of the bank overdraft. The balance-sheet must inevitably show a debit of between £1000 and £2000. This sum was accordingly asked for by the deputation, although it is understood that a Royal Commission is likely to recommend that a sum of

£7000 or £8000 more is necessary to keep the institution up to the proper standard. Mr. Bent promised to give the matter consideration, and, when speaking at the University commencement on April 9th, said that without making promises, he would fairly and honestly take into consideration the want of funds by the institution, and he hoped that when the Estimates came forward there would be satisfaction at the action of the Government. The announcement was loudly cheered.

Civil Ambulance and Transport Brigade.

At the eighth annual meeting of the Civil Ambulance and Transport Brigade held last month, the annual report showed that the year's work was represented by 2473 cases in which officers and ambulances had been engaged in transport services, covering 11,329 miles. Compared with the previous year, the records for the past months showed an increase of 12 in the number of cases dealt with, and 325 miles in the mileage travelled. The work had extended far into the outlying suburbs; in 1902 each case averaged 4·47 miles, but in 1903 the average was 4·58 miles. Since the formation of the brigade 13,363 persons had received the benefits of its ministrations. The services of the brigade were utilised by seamen and wharf labourers on 153 occasions during the past year; 197 cases of injury were received by employees in factories and workmen in the erection of buildings; the accidents in the streets by trams, vehicles, etc., attended to numbered 478; while 102 came from sports meetings, and 123 from dwelling-houses. Of the total number, only 36 had been conveyed to the morgue. After much consideration, it had been decided to become a corps of the St. John Ambulance Brigade, and henceforth it would be known as the Civil Ambulance and Transport Corps of the St. John Ambulance Brigade. The financial statement showed a deficiency of £222 1s 10d for the year, the increased demand on the services of the brigade having rendered additional expenditure absolutely necessary.

Divine Healing.

According to a report in the *Sydney Morning Herald*, the infant daughter of a farmer died recently at Kangaroo Island, She was 11 months old, and had been ailing for about nine months. The first symptoms of illness appeared about six weeks after birth. This increased as she grew older. The parents did not give the child medicine. It was stated at the inquest that they did not believe in the use of medicine, but in Divine healing. The father said that once he believed in doctoring, but found no relief resulted from such treatment, and now he believed wholly and solely in Divine healing. The jury found that the child died from natural causes, and that the father should have sought medical aid for it. Kangaroo Island is the stronghold of the Dowieites. Dr. Gladstone Dowie is reported to have stated that hundreds of children afflicted similarly to this case recovered in Zion City without the use of medicines. He said: "Only this week we have learned that during the past two months not a single death has taken place in Zion City among persons under 35 years of age, and there is not a doctor or a drug or a drop of medicine in the whole place. Plenty of babies have been born during that period. No doctor's medicine or instruments play any part in childbirth, the mothers being attended by competent maternity deaconesses." Quite another version of the mortality rates in Zion City was given recently by one who had visited the cemetery in that place, and who reported that the death rate was something over 35 per 1000, and a very large proportion of the deaths being of infants under one year. Doctors' medicines and instruments are, therefore, not entirely responsible for a high rate of infantile mortality.

Preservatives in Food.

Recently the manager of a concentrated milk company was prosecuted for selling milk containing more boracic acid than was allowed by the Public Health regulations, and he was fined £2, with the alternative of seven days' imprisonment. The fine was not paid, and on the prosecuting officer applying to the chamber magistrate for a warrant of commitment the latter declined to grant it, on the grounds that he was acting under instructions from the Minister for Justice. A rule *nisi* was granted by Mr. Justice Owen calling upon the magistrate to show cause why he should not be compelled to do what was required of him. The Board of Health have rightly declined to be bound by the report of the select committee on preservatives in foods, which was so obviously biassed, and in insisting upon the penalty being inflicted are acting only in the best interests of the public health.

BRITISH MEDICAL ASSOCIATION NEWS.

PROCEEDINGS OF AUSTRALASIAN BRANCHES.

New South Wales.

The annual general meeting was commenced at the Association Rooms, 121 Bathurst-street, Sydney, on Thursday, March 24th, 1904. Dr. MacCormick, vice-president, in the chair.

The Chairman appointed Drs. Sawkins and Palmer, scrutineers, and Drs. Blackburn and Windeyer, assistants, and handed the ballot papers to the scrutineers. The meeting then adjourned.

The adjourned annual meeting was held at the Royal Society's Rooms on Friday, March 25th, 1904. Dr. MacCormick, vice-president, in the chair. There were 40 members present.

The minutes of the previous meeting were read and confirmed.

The Chairman announced the election of the following new members:—Dr. Page, Grafton; Dr. R. Schuette, Merriwa; Dr. T. D. Bertram, Coonamble; Dr. Taylor Handcock, Samarai, British New Guinea; Dr. H. R. Rice, Lithgow; Dr. F. S. Davis, Prince Alfred Hospital; and Dr. E. De Marco, White Cliffs.

The acting hon. secretary (Dr. Abbott) proposed that the annual report of the Council be taken as read.

The hon. treasurer (Dr. Crago) explained the balance-sheets, and moved the adoption of the report and balance-sheets. Dr. Abbott seconded the resolution, which, after discussion, was carried.

In the absence of the president (Dr. Brady), the acting hon. secretary (Dr. Abbott) read the address of the president. (See page —,)

Dr. MacCormick moved a vote of thanks to Dr. Brady for his address. Carried.

The Chairman announced the result of the election of office-bearers and councillors:—President, Dr. A. MacCormick; vice-president, Dr. Beeston; councillors, Drs. Abbott, Crago, Rennie, Hankins, Dick, Pockley, Maitland, Newmarch, Hinder, Worrall, Brady, Hood; auditors, Dr. F. W. Hall and Dr. F. S. Sawkins.

Dr. Taylor Young suggested that the Council should take steps to circulate to those members interested a synopsis of the papers to be read at the general meetings, so that better discussions would take place.

Dr. Crago said it would throw a considerable amount of extra work upon the secretary to prepare such a statement. However, the Council would be prepared to consider the matter.

The Annual Report of the Council of the New South Wales Branch of the British Medical Association for the Year 1903-4.

Gentlemen,—The Council, in presenting the report for the year 1903-4, desires to congratulate the members upon the marked success of the year's work and the continued unity of the profession.

There have been 12 general and 14 Council meetings during the year. The atendance at the general meetings has been extremely satisfactory, and the interest in the various papers submitted for discussion has been fully maintained. There were 23 papers read and 31 exhibits shown.

The membership now numbers 479. There were 37 new members elected during the year and 10 resigned; 3 were removed by death (Drs. W. H. Goode, F. Norton Manning, and T. Pickburn). Under the new rules of the parent association all the members of the Branch residing in another State must be transferred to the local Branch; by this arrangement the membership of this Branch has suffered somewhat. The Branch is now the largest colonial one, and numbers fully five-sevenths of the profession in New South Wales. Every effort should be made by the members to get those who are not yet members to join the Branch, so that the profession may continue as a united body.

Dr. G. E. Twynam and Professor Charles Martin have been appointed to represent this Branch on the Council of the parent association.

During the year the question of lodge practice in Inverell has been under consideration, and the Council takes this opportunity to congratulate the medical men of that town for the determined stand taken by them, and for the success they have attained.

By the death of the late Dr. F. Norton Manning a gap has been made in the ranks of the profession which will be difficult to adequately fill. Owing to indifferent health Dr. Manning was not seen very often at our general meetings, but his influence was widespread, and his loss almost irreparable.

The executors to the will of the late Dr. F. N. Manning kindly presented a portrait of Dr. H. B. Jones to the Branch.

In the death of the late Dr. W. H. Goode another well known and respected personality will be missed from our midst. Dr. Goode was connected with the Branch for a number of years, and took a lively interest in the work of the general meetings.

The subject of medical witnesses' fees has again been brought prominently forward during the past year, and the Council is able to report that the matter has now been settled and fresh regulations have been approved.

The Balmain Friendly Societies' Dispensary has caused a good deal of correspondence of late, and it has now been definitely decided to place the dispensary on the confidential list. The dispute has been going on for the past two years without any likelihood of a satisfactory settlement. The unsatisfactory way in which the officers dealt with the Council showed clearly that there was no real desire for an amicable arrangement to be arrived at, and the action taken was forced upon the Council.

One pleasing feature of the dispute with the Balmain Dispensary is the fact that the Balmain District Medical Association has been resuscitated. Dr. Wilson has been appointed president, and Dr. Carruthers hon. secretary.

A communication was received from the Australian Natives' Association, asking for a reconsideration of the position of affairs, but the Council decided not to re-open the subject, but to adhere to the decision of the Branch not to recognise the Australian Natives' Association as a medical benefit society.

An effort has been made to restrict the delivery of fresh milk in the city and suburbs, and the Council at

STATEMENT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDED 31ST DECEMBER, 1903.

RECEIPTS.

1903. January 1.	£	s.	d.
To Balance brought forward	115	5	5
„ Refund from *A. M. Gazette*	100	0	0
„ Subscriptions	980	9	10
„ Amounts added for exchange.. ..	2	10	0
„ Interest	5	18	0
„ Branch subscriptions from Parent Association	4	16	0
	£1208	19	3

EXPENDITURE.

January 1.				£	s.	d.
By *British Medical Journal*				503	9	0
„ *Australasian Medical Gazette*				348	0	0
„ Postage and receipt stamps				28	5	10
„ Printing and stationery				28	4	9
„ Rent, Royal Society				12	0	0
„ Refreshments				12	0	0
„ No. 3 Account				50	0	0
„ Two subscriptions returned				4	4	0
„ Assistant librarian				20	0	0
„ Exchange (cheques)				4	4	0
„ Bank charges, cheques, etc.				5	18	0
„ Shelving				2	15	0
„ Balance in Bank ..	189	11	3			
„ „ petty cash ..	0	7	5			
				189	18	8
				£1208	19	3

Examined and found correct.

FRED. J. T. SAWKINS, } Auditors.
FRED. W. HALL, }

W. H. CRAGO, Hon. Treasurer.

March 10th, 1904.

once took steps to oppose the application for a common rule, and passed a resolution protesting against such a regulation being enforced, as it would be likely to increase the mortality amongst infants. Dr. G. E. Rennie was appointed to represent the Branch in the Arbitration Court. This matter is still *sub judice*.

The question of a Midwives Bill was again under consideration, and a sub-committee, consisting of Drs. Foreman, Worrall, Crago, and Dick, was appointed to report upon the matter. The report was forwarded to the President of the Royal Commission on the decline of the birth-rate. (*N.B.*—This report is appended.)

It will be seen from the report of the manager that the *Australasian Medical Gazette* has been very successful during the past year, owing entirely to the efforts of the editor and manager (Drs. Rennie and Crago). To these gentlemen too much praise cannot be given for their untiring work in connection with the *Australasian Medical Gazette*.

The hon. secretary (Dr. G. T. Hankins) has been granted leave of absence to enable him to proceed to England. The Council takes this opportunity of placing on record its high appreciation of his sterling work in the advancement of the Branch and the profession generally. Dr. Abbott was appointed acting hon. secretary.

The hon. treasurer's statement shows a credit balance of £189 18s 8d to the general account, and the *Gazette* account has £93 2s 4d to its credit.

The list of papers read, and exhibits, together with the attendance of the councillors and the balance-sheets, are appended hereto.

A. J. BRADY, President.
G. H. ABBOTT, Acting Hon. Secretary.

THE SUB-COMMITTEE APPOINTED TO INQUIRE INTO THE QUESTION OF A "MIDWIFERY NURSES ACT" REPORTED AS FOLLOWS:—

1. The fact that all members of the medical profession are registered under an Act of Parliament has not prevented certain members from carrying on the practice of abortion to a notorious extent.

2. The registration of midwifery nurses under a similar Act, instead of acting as a deterrent, would, in the opinion of the Council, by making them independent practitioners, give them greater opportunities of performing improper or illegal operations.

3. All advantages that could be hoped for from an Act of Parliament are already attained by means of the registration of midwifery nurses by the Australasian Trained Nurses' Association.

4. In the opinion of the Council the most effective means of preventing abortion-procuring is the licensing, registration, and inspection of all private hospitals and lying-in homes and houses where patients are admitted for any kind of medical or surgical treatment.

The report was forwarded to the President of the Royal Commission on the Decline of the Birth-rate.

ATTENDANCE OF COUNCILLORS AT COUNCIL MEETINGS

There were fourteen meetings held.

Dr. Crago attended 14 meetings, Rennie 12, Worrall 12, Brady 12, Hankins 11, Dick 11, Abbott 11, Hinder 11, Pockley 11, Newmarch 9, Foreman 9, Fiaschi 8, Beeston 3, MacCormick 3.

THE "AUSTRALASIAN MEDICAL GAZETTE."

To the Council of the N.S.W. Branch of the
British Medical Association.

I have the honour to report that the year 1903 has been a record one in the history of the *A. M. Gazette*. The receipts for the year have exceeded those of any previous year. This is due chiefly to the great increase in the advertisements, which increase promises to be maintained during 1904. A considerable increase was also due to the fact that all the Branches—our own included—paid 15s net for each member's subscription instead of being allowed a deduction of from 5 to 10 per cent. off that amount, as during the past three or four years.

The time has now arrived when the amount paid for the *Gazette* (£1150) can be written off if so desired and still leave a surplus of assets over liabilities, as the amount to the credit of profit and loss account amounts to over £1300.

The balance due to the contributors to the "*Gazette* Fund" was paid off last August, so that the only liability of the *Gazette*, beyond the ordinary monthly accounts, is £362 8s to the Branch, being part of the purchase money.

Dr. Dick returned his cheque (£2 10s) as the nucleus of a fund to provide an official costume for the President of the Branch, but so far no other contribution has been given for that purpose. The accounts, duly audited, will be found herewith.

W. H. CRAGO, Manager.

March 10th, 1904.

BALANCE-SHEET, DECEMBER 31st, 1903.

LIABILITIES.

	£	s.	d.
To N S.W. Branch B.M.A.	362	8	0
,, Sundry creditors, being unexpired portions of contracts paid in advance	13	11	5
,, W. E. Smith	72	13	4
,, Advertisement Revenue Account (being unexpired portions of contracts included in Advertisement Revenue Account	279	2	3
,, Reserve for bad and doubtful debts ..	90	0	0
,, Balance, Profit and Loss Account ..	1305	13	7
	£2123	8	7

ASSETS.

	£	s	d.
By Goodwill (at cost)	1150	0	0
,, Sundry debtors..	880	6	3
,, Cash at Bankers	91	9	9
,, Petty cash balance	1	12	7
	£2123	8	7

PROFIT AND LOSS ACCOUNT.

DR.

	£	s.	d.
To Printing account	702	12	2
,, Editor	100	0	0
,, Manager	50	0	0
,, Stamps, rent, salaries, commission, bad and doubtful debts written off, and other expenses of management	445	8	9
,, Balance..	1305	13	7
	£2603	14	6

CR.

	£	s.	d.
December 31st, 1902.			
By Balance	854	6	10
December 31st 1903.			
,, Advertisement Revenue Account ..	926	6	5
,, Subscription Revenue Account ..	823	1	3
	£2603	14	6

FRED. W. HALL,
FRED. J. T. SAWKINS, } Auditors.
March 10th, 1904.

W. H. CRAGO, Hon. Treasurer.

LODGE PRACTITIONERS' DEFENCE FUND.

The trustees have to report that the response from members of the Branch has not been at all satisfactory, as only about £135 have been sent in, although £200 were promised. The attention of members is earnestly called to the importance of putting this fund in a strong financial position, as it is very likely that before long calls will be made upon it, and the knowledge that such a fund is in existence will materially help the Council in its fight with undesirable associations. A statement of the accounts is given herewith.

RECEIPTS.

	£	s.	d.
Subscriptions and donations to December 31st, 1903..	135	1	6
Interest do.	2	7	
	£137	8	9

EXPENDITURE.

	£	s.	d.
By Books	0	7	6
,, Exchange	0	15	0
,, Balance in Savings Bank	136	6	3
	£137	8	9

W. H. CRAGO,
F. H. FURNIVAL,
D. THOMAS, } Trustees.

Council Meetings.

The Council met at the Association Rooms on Thursday evening, March 10th, 1904. Present: Drs. MacCormick, Rennie, Crago, Abbott, Hinder, Dick, Worrall and Pockley.

The minutes of the previous meeting were read and confirmed.

New members elected :—Drs. H. R. Rice, of Lithgow; J. Taylor Hancock, of Samarai, British New Guinea ; and Dr. De Marco, of White Cliffs.

Nominations of councillors were received.

Drs. Crago and Rennie were appointed to sign the ballot papers.

It was resolved that Drs. Palmer and Sawkins be asked to act as scrutineers, and Drs. Stacy and Blackburn as assistants.

The annual report of the Council was read, and after amendment was approved.

The report of the manager of the *Gazette* was read, and the balance-sheets were approved for presentation to the annual meeting.

It was decided to republish the confidential list.

The Council met at the Association Rooms on Tuesday, March 29th, 1904. Present: Drs. MacCormick, Crago, Jarvie Hood, Rennie, Newmarch, Abbott, Hinder, Pockley, Dick, Worrall.

The minutes of the previous meeting were read and confirmed.

Resolved—" That Dr. Hankins be appointed hon. secretary and Dr. Abbott acting hon. secretary during Dr. Hankins' absence on leave."

Resolved—" That Dr. Crago be hon. treasurer."

Resolved—" That Dr. Hankins and Dr. Scot Skirving be appointed representatives of the Branced at the annual meeting of the parent Association, ogether with Drs. Mackellar and Brady."

Dr. Crago read the estimate of receipts and expenditure for the ensuing year.

Resolved—" That Dr. Rennie be editor, and Dr. Crago manager of the *Gazette* for the ensuing year."

Dr. Crago reported upon the various balances as follows :—General account, £190 17s 2d; *Gazette* account, £122 3s 9d. Accounts passed for payment: Pepperday & Co., £2 16s ; *Gazette*, £75 ; stamps, £5 ; petty cash, £5 ; Home Association, £26 15s.

Dr. Crago explained the procedure of managing the *Gazette*.

Resolved—" That in future the assistant librarian be paid from *Gazette* account, instead of the Branch fund."

Grooms' and Coachmen's Union.—Letter from Messrs. Sly and Russell was read.

South Australia.

The usual monthly meeting was held at the University on March 31st, 1904. Present: The President (Dr. Jay), 24 members and two visitors.

Cases.—Dr. Poulton : A young girl on whom he had successfully operated for hydatid of brain. Dr. J. C. Verco : Pulsating Hydatid of Liver.

Pathological Specimens.—Dr. J. A. G. Hamilton showed the following specimens :—(1) Two uterine fibroids removed by myomectomy, the subject of his paper, " On an unusual accident to a fibroid tumour, complicating pregnancy." (2) Two very large pus tubes, probably tubercular, removed from a healthy young married woman, aged 26. The tubes and ovaries, which were densely adherent to each other, and the surrounding structures, were removed intact by working down from above and opening up the broad ligament, instead of working from below. A strange feature about this case—the woman looked particularly healthy, and only consulted me because she had been married some years and was sterile. (3) A sickly-shaped appendix, with a short omentum. The patient had had six or seven attacks of colic within the last 18 months. On opening out the appendix, there was evidence of a rupture having taken place, and probably a leakage, as the omentum and intestines were densely adherent all around it. The inflammation in the appendix has evidently been caused by want of proper drainage.

Dr. Poulton : Aorta and Vertebræ from a case of gunshot wound ; darning needle three inches in length swallowed by a young adult female, removed by incision in anterior abdominal wall in middle line about two inches below umbilicus. The needle was directed backwards and upwards. The point had just penetrated the rectus. The peritoneal cavity was not opened up to search for intestinal wounds, and the incision was closed by sutures. The point had just penetrated the rectus. The needle was directed backwards and upwards.

Papers.—Dr. Hone : Gestation in Cases of Heart Disease. Dr. J. A. G. Hamilton : Gestation Complicated with Fibroids.

An interesting discussion ensued, in which Drs. Reismann, Harold, W. T. Hayward, Lendon, Gault, J. C. Verco, Glynn, and Scott took part. The generally expressed opinion was that the dangers of heart disease in cases of gestation was not so great as described in text-books of midwifery.

Victoria.

The ordinary monthly meeting of the Victorian Branch of the B.M.A. was held at the rooms, 178 Collins-street, Melbourne, on the evening of the 23rd March.

The Secretary (Dr. Vance) apologised for the absence of the president (Dr. Weigall), as he was suffering from an attack of influenza.

Dr. Bryant (vice-president) took the chair.

After the minutes of the last meeting had been taken as read,

Dr. Henry read his notes on a " Case of Aneurism of Transverse Aorta." (See page 162.)

Dr. Cuscaden congratulated Dr. Henry on the success of his treatment, and also thanked him for exhibiting the patient. He regretted that a photograph had not been taken of the case before and after treatment, and asked Dr. Henry how he accounted for the disappearance of the tumour?

Dr. Fox considered this a case of exceedingly successful treatment of a usually fatal disease, and when such a result was attained, as in this case, it deserved every commendation. He had given up to 180 grains of pot. iodide per diem, and found that patients tolerated these large doses very well. The diagnoses of aneurisms were, as a rule, fairly easy in the later stages, but in the early stages great help could be given by means of the X-rays, and an increase in the size and shape of the aorta could be clearly made out. He thought it would be very interesting to examine this patient now by means of the X-rays, and if fibrinous deposits were within the aneurismal sac it could be seen, and also absorption of the ribs or other parts could be detected. In this case there did not seem to be any change in the bony structures.

Dr. Beckett could not remember an aneurism of the aorta causing a bulging of the sternum as this case did ending in any but one way. He also thought it would be interesting to see the case with the help of the X-rays. During the last twelve months he had examined three cases of supposed aneurism by means of the X-rays in order to assist the diagnosis, and did not find any aneurism, nor had any since developed.

Dr. Bryant asked if a gumma in this situation, pressing upon the aorta and causing a tumour over the sternum, might not have simulated an aneurism in this case, particularly as this tumour had disappeared so entirely under big doses of pot. iodide?

Dr. Henry, in reply, said that he excluded gumma on account of the following symptoms, viz., thrill, soft pulsating character, tugging of the trachea, and the effect on the vocal cords. He did not know of any cases recorded of an exactly similar nature responding to treatment as this one did. He thought the very large doses of pot. iodide had a great deal to do with the result, and he would be glad to accept Dr. Fox's offer to examine the patient under the X-rays.

The patient was exhibited to the members, and apparently all signs of an aneurism had disappeared, except the paresis of one of the vocal cords.

Dr. Fox then read a short account of the "X-ray Treatment of Malignant Growths," and exhibited a case of scirrhus of the breast, recurrent after operation, and then cured by X-ray treatment.

Dr. Beckett expressed his sorrow that so few members were present at such an interesting paper. He considered this a most important question at the present time, and very few of the profession seemed to take an interest in it. For rodent ulcer the X-ray treatment was the most satisfactory of all, and it was a most valuable fact to know that it was quite possible to cure superficial epithelioma and scirrhus of the breast. He had by this means cured many cases of recurrent scirrhus of the breast, and had not met with a single case that had not responded to the treatment, and not one of those so treated had yet died, and he saw no reason why they should recur. It was almost hopeless to try and persuade some surgeons of the good results to be obtained by X-ray treatment. He had found that the recurrence of breast scirrhus in neighbouring glands often cleared up under this treatment, but had not found the same experience in the glands in other parts of the body. In primary scirrhus of the breast it was equally possible to cure; the only difficulty was to get the cases early enough.

Dr. Henry expressed his interest in the history of Dr. Fox's case, and felt sanguine this was the proper way to deal with the disease. There should be a concentration of medical interest towards the ætiology and treatment of cancer, and most likely the effects of the X-ray treatment would help to solve the ætiology. The information gained at these meetings ought to be disseminated so that patients might present themselves at the earliest moment for treatment. He thought that the thanks of the meeting ought to be recorded to Dr. Fox for his most interesting paper.

Dr. Bryant quite agreed with Dr. Henry in his remarks, and drew attention to the peculiarities of the same type of cancer in different constitutions. In one case of epithelioma of the lip, the disease had recurred after operation with alarming rapidity, and although operated upon twice most thoroughly, had ended fatally in nine months; and yet in an exactly similar case after removal, there had been no sign of recurrence, although fully ten years had passed over since the operation. These were points that had to be considered in the treatment of cancer, and they were very hard to account for.

Dr. Fox, in reply, said he was sure that surgeons often deceived themselves with regard to cases they thought were cured. Patients drifted away from them and consulted other people, and during the last few years he had seen a great many cases that were supposed to be cured after operation which had relapsed, and were beyond hope of cure from any other treatment. He knew of a case that had been repeatedly operated upon and which cleared up completely under X-ray treatment, and the surgeon who had operated, most ungraciously refused to give credit to the X-rays, but maintained that it was due to his repeated operations. He felt sure that early recurrent scirrhus was quite amenable to X-ray treatment.

Queensland.

A meeting of the Queensland Branch of the B.M.A. was held on April 8th, at the School of Arts, Brisbane; Dr. W. S. Byrne in the chair, with an attendance of 19 members.

The Secretary announced that, in accordance with the resolution passed at the last meeting, a deputation of members of the Council, with Dr. Little, had waited upon Dr. Ham, Commissioner of Public Health, and placed before him their views on the subject of the notification of phthisis; that Dr. Ham had received the deputation sympathetically, and promised to do what was possible in furtherance of their views.

Dr. J. Lockhart Gibson read a paper upon "A Plea for Painted Railings and Painted Walls of Rooms as the Source of Lead Poisoning amongst Queensland Children."

Dr. Turner said that he was unable to understand the scepticism expressed by some medical men as to the nature of these cases. The first case was observed by him in 1890, although he saw no reason to doubt that cases had occurred before that date. In 1891 several further cases came under observation and were carefully investigated by Dr. Gibson and himself. They showed foot-drop, wrist-drop, and wasting of the small muscles of the hand, and some of them had attacks of colic. The foot-drop almost invariably preceded the wrist-drop, and was later to recover. Sometimes it was the only paralytic symptom. This raised a difficulty, as it differed from the symptomatic course of lead palsey in adults. But the difficulty was removed when it was discovered that Dr. J. J. Putnam, in describing the symptoms of lead poisoning in children, had shown that this was the normal cause of the paralysis in them. The diagnosis of plumbism appeared to be placed on a firm basis when the black dots of lead sulphite were found on the gums in many cases. These were very minute, as a rule, and might need a lens for their discovery, and were often found opposite only one or two foul teeth. A continuous line on the gums occurred but rarely. The term "blue line," usually employed, was apt to mislead. When lead was found in the urine of many cases by the public analyst, he considered that the diagnosis had been established beyond any reasonable doubt. Lead was not found in the urine of every case examined, nor, when found in a case, was it necessarily present in every sample. The excretion of lead by the urine appeared to be variable, scanty (as a rule), and intermittent. These negative analyses did not justify scepticism. He had also at the same time that the cases described above were being investigated been very interested in some cases of "ocular paralysis," which did not correspond to any disease which he had seen described. The usual symptoms were headache, paralysis of one or both external recti, and optic neuritis. His first diagnosis had been early cerebral tumour, but when the case made a perfect recovery, he doubted its correctness. When several cases of a similar character had been observed he was inclined to regard them as cases of a peculiar form of basic meningitis. But this diagnosis also appeared unsatisfactory; and there was no doubt that these also were cases of plumbism, as was shown first by Dr. Gibson. He believed that the symptoms of the two forms of lead neuritis never occurred together. But (1) very rarely a child had suffered first from one form and then from the other; (2) occasionally the two forms occurred in different children of the same family; (3) many of the cases showed lead dots on the gums; and (4) in some of the cases the urine showed lead on analysis. With regard to the causation, they had been very much in the dark; but Dr. Gibson had thrown a good deal of light on the subject. He considered that a very strong case had been made out for paint as the main cause, and for sucking the fingers and biting the nails as important favouring causes. The cases occurred in towns all over Queensland as well as Brisbane. Yet they could not be found in similar numbers in the southern States, or surely cases would have been recorded. He believed that some cases did occur in New South Wales, for he had seen two children in one family with foot-drop, wrist-drop, and lead dots on the gums, who had contracted the disease in Kiama, N.S.W. There must be something peculiar in our mode of living in Queensland to make the affection so common here. Only two suggestions had commended themselves to him as adequate: (1) The storage of drinking water from galvanised iron roofs with lead-capped nails in galvanised iron tanks containing lead in the solder; (2) the living in wooden houses, painted with lead paint. The water was first suspected, and when the analyst reported that lead had been found in three samples of tank water, this appeared to be a highly probable cause. It was frequently noted that cases improved when removed from home, and relapsed after returning. This was naturally attributed to drinking the tank water. But numerous subsequent analyses of the water had proved negative, and it appeared probable that there had been some fallacy in connection with the early analyses. The Government Analyst went so far as to say that the existence of lead in solution in water contained in zinc tanks was impossible, and, if this were so, of course this water could not be a cause of poisoning. Dr. Gibson's theory explained well (1) the great frequency with which the habit of sucking the thumb or biting the nails was observed in these children, a point he could corroborate; (2) why the cases got well on being removed from home and relapsed on return, and how removal to another house was frequently curative, yet sometimes failed; (3) why adults in the family had, in his experience, never been affected; and (4) the greater frequency of attacks in the summer months. Dr. Gibson had elucidated a matter of great practical importance

Dr. Taylor said that the failure of the Royal Commission appointed some years ago to enquire into the cause of lead poisoning in children was largely due to the limited amount of money at its disposal. The examination of tank and tap water had been generally negative, and that of aerated water positive in some cases. He reminded members that at the time when the causation of lead poisoning was under general discussion that Dr. Maffey had suggested the paint of fences and house as a probable cause. He himself felt uncertain whether zinc was not accountable for some of the cases attributed to lead.

Dr. Wilton Love remarked that in almost all the cases of lead poisoning, the first attack came on below the age of eight, which was the finger-sucking age; he referred to the condition of talipes equinus, not apparent at birth, which persisted after other symptoms of lead poisoning had passed off. That these cases were not due to zinc had been shown at the time when this drug was largely used in the treatment of epilepsy.

Dr. Salter expressed surprise, in view of Dr. Gibson's theory of the cause, that the disease was not scattered more indiscriminately throughout the community, the sufferers being confined almost entirely to the poorer classes. He remarked also on the peculiar manner in which families were affected, and related an interesting case where the cause was traced to the sucking of floor-cloth.

Dr. Kerr Scott said that he understood that the basis of paint for housework in India was zinc, and the information of value might be obtained by ascertaining if any cases similar to those found in Queensland were met with in India.

Dr. Nield remarked upon the large percentage of children who sucked their thumbs and fingers, and mentioned one case of lead poisoning which occurred in a large family and was the only one of all who sucked his thumb.

Dr. Halford had elicited the fact that nearly all the cases which had come under his notice were finger-biters. He thought that the greater prevalence of the disease in Queensland was due to the climate and conditions of which rendered house paint more sticky. That such cases did not occur in the bush was due to the fact that few bush houses were painted, and related a case which occurred in Clermont where all the family except the baby at the breast had suffered from lead poisoning due to paint.

The President congratulated Dr. Lockhart Gibson upon his valuable contribution by which a distinct advance in the knowledge of lead poisoning had been secured.

Dr. Lockhart Gibson, in reply, said that the theory of zinc as a cause of the cases was untenable, and thought that it was a pity that doubt should be placed upon the diagnosis as lead poisoning.

Ballarat.

The ordinary bi-monthly meeting was held at the Ballarat-Hospital on March 26th. President (Dr. J. T. Mitchell) and ten members were present. Apologies for non-attendance were received from five members. Drs. Fleetwood and Langmore were present as visitors.

Minutes of meeting held on November 28th, 1903, were read and confirmed on motion of Drs. Sleeman and Sloss. Minutes of special meeting, altering night of meeting from Saturday to Thursday, were read and confirmed.

Dr. M. C. Lidwill read an interesting paper on "Osteitis Deformans," and exhibited the patient and several photographs. The distortion of the bones was very marked, especially in the upper extremities. In the discussion which took place, the President stated that he well remembered Sir J. Paget's first paper on the disease and the stir it created, and that our knowledge of the condition had advanced very little since then, the treatment being then summarised in the words, "milk marrow massage."

Dr. **Robert Scott** had seen the patient about ten years ago, and had then remarked about the unusual curves of the clavicles.

Dr. **Nisbet** said that any addition to the better understanding of the pathology of chronic bone disease would be warmly welcomed, and the present case ought not to be lost sight of. He did not think that cancer was so common subsequently as Sir J. Paget mentions, or that the disease always occurred in people beyond middle life, as he had seen a case at 18 and one at 37 years recorded. He thought it was related to osteo-arthritis.

Dr. **Lidwill**, in reply to questions, stated that the mental and physical conditions were good. There was no intestinal decomposition, and that Ziegler considers the disease to be closely related to both osteo-arthritis and osteo-malacia.

Dr. **Hardy** showed a patient from whom he had removed a sarcoma of the superior maxilla.

After an animated discussion on the relationship of the profession to unregistered practitioners, the following resolution was unanimously carried:—"That this Branch urges on members of the Association the advisability of absolutely refusing to attend any patient (obstetric cases excepted) who at the same time is being treated by an unqualified person. In the event of the patient agreeing to discharge the unqualified person, the medical man is at liberty to continue his attendance."

The meeting then terminated.

Reports of Other Societies.

THE MEDICAL DEFENCE ASSOCIATION OF VICTORIA.

The eighth annual meeting of the Association was held in the Medical Society's Hall on Tuesday, February 9th, 1904, at 8.30 p.m.

In the absence of the president, Dr. F. G. Hamilton (vice-president) presided. The minutes of the previous annual meeting were read and confirmed. The following annual report for 1903 was then read by the hon. secretary:—

ANNUAL REPORT FOR 1903.

Your Council has much pleasure in presenting its eighth annual report and financial statement for the year ending December 31st, 1903.

Although the progress in the matter of organisation has not been so marked as in some previous years, yet the Council can fairly state that much more use has been made of the organisation we at present possess than has been the case in the past. It may be a good time to take a retrospect, and try to find our weak points and suggest remedies. The incoming Council will be glad to put the defences in order, or in any way act on the advice of members, if it be for the furtherance of the interests of the Association. The most obvious and also the most vital weakness is that of lack of sufficient members. In an association like this even a few outstanding non-members may make all the difference between success and defeat. Whilst the aim of the Association was limited almost entirely to the defence of medico-legal actions, it was not a matter of importance to members whether others joined or not to enjoy shelter and protection. If they elected to remain outside the Association and chance any action ever being brought, that was their business. Now, however, that the Association is attempting more and more in the interests of the profession as a whole, especially in lodge matters—as raising lodge fees and getting better terms or agreements—members cannot afford to let others remain outside the Association. Whether they join or not is now our business, and it behoves each member to make an attempt to get his friends in as members. A list of non-members is published with this report, together with some application forms.

There have been 28 new members elected since January, 1903. Though this number is not nearly so great as during the previous twelve months, when 83 new members were elected, it is probable that during 1902 such an effort was made that there were fewer left to join. The Council would welcome every one, as there is room for all the desirable practitioners in the State in this Association. The advantages of membership should be apparent to everyone, and if any practitioner desires to know further reasons why he should join, the following will suffice:—

1st, Personally.—You will protect your own interests, and will lessen the chance of vexatious actions being brought against you; while, if such do arise, you will have a powerful body behind you to support your interests and advise your action.

2nd, Generally.—You will assist in forming a united and strong Association to act in checking abuses affecting the profession, especially with relation to benefit societies; in procuring new legislation in the interests of the medical porfession; and in removing various grievances under which the profession labours.

The *Australasian Medical Gazette*, in its leading columns of April 24th, 1897, says:—

> "Every practitioner in Australasia, whatever other medical combination he may join, should become a member of a union similar," *i.e.*, to a medical defence association or medical union.

The quarterly reports issued (usually a little late in order to keep members posted up in the quarter's business) have been a distinct success, as exemplified by the large number of letters which the Council has received during the year in praise of the idea. Sometimes these reports are necessarily short, but your Council is of opinion that a short account of its doings is better than no account at all. Once it happened that the quarterly report lapsed for want of material; such a happy state of affairs is not likely to occur often.

Lodge Matters.—Friendly societies generally have been very active during the past year, and efforts at combining for purposes of reduction of fees, or in order to resist demands of medical officers for better agreements, have been numerous, and in some instances their methods quite novel. In one case—that of a hospital practice—the lodges attempted to combine their own practice, and made strong efforts to induce the local hospital to join in with them. The salary proposed was less than the lodges alone paid the preceding doctor. The hospital board declined, and the movement fell through.

Objections have been made by lodges in several instances to the practice of medical officers selling their lodge practice, and threats of not transferring the appointments have been made, but in no instance have they been able to enforce the threat. It would be well for practitioners to keep this in mind when negotiating for practices; and in this connection the Council wish to point out the position which any medical agent may take in the matter. If any case of unfair dealing arise, the Council would be glad to hear full particulars, and in case of censure the Council look to the members to support any action it may take by refusing to transact business through that agent.

Medical agents in the past have not, it must be said, supported the combination of friendly societies, for the reason that it imposes a serious obstacle to the buying and selling of practices; but it is well to know that any particular medical agency business is conducted on lines conducing to the general interest of the profession. The Council will gladly deal with any complaints.

In one case which arose this year in a town about 25 miles from the metropolis a small lodge of 37 members made an attempt to get a combination of the lodges. The lodge surgeon promptly notified the lodges that he would resign them all, and in any case he would resign the lodge containing the 37 members. This lodge has now to obtain the services of a doctor over 20 miles away, as his colleagues supported him loyally. Were such actions more common how different might practice be. In another inland town where two medical men practise, the lodge difficulty was becoming unbearable, and the two men were finally threatened with a combined friendly societies' dispensary. They combined, and offered the lodges the model agreement. The nearest doctor was 30 miles away, and as the practitioners resigned on a certain date their private practice swelled considerably. The lodges advertised, but a warning advertisement was inserted by your Council, and they did not get a single applicant. The lodges had then to ask the doctors on what terms they would be taken back, and acting on the advice of the Council the medical men again offered them the model agreement or nothing. The model agreement, as set forth in the annual report, was accepted.

Whilst on the subject of lodges, it behoves the Association to be prepared, should at any time in the near future any of the United Friendly Societies' positions fall vacant. The Council cannot hope to stifle these institutions, but what it does hope and strive for is to regulate the class of applicants so that they shall not be worth more than the salaries offered. So long as the Association can by its efforts insure that these institutions are poorly officered, the privileges of belonging to a medical institute cannot be regarded by its members as being worth more than the absurdly low rates of subscription.

In this report a list of names will be found, the correct addresses of whom are required by the hon. secretary, and the Council would be glad if members would notify him of the present address of any they may know as soon as possible. In no other way can we hope to reach medical men if we wish to communicate with them urgently. When the Bendigo United Friendly Societies advertised, some of our notices miscarried owing to wrong addresses, and it is not desirable that such should happen on a future occasion.

Medical Institutes.—During the year a Medical Institute has been established at Brunswick. The whole movement and the action which the Council has taken to neutralise the evil effects of such establishments have been fully set forth in the quarterly reports, and are probably quite fresh in the minds of members. The Loyal Catherine Lodge of Eaglehawk has been running such a dispensary on its own account for some two or three years, but its life has been short, for quite recently it was shown that it is about £500 to the bad, and it recently asked the old doctors to it to again tender for it, but as the tender included medicines the offer was most respectfully declined. The medical men of Eaglehawk outside the dispensary have stuck well together, and Dr. V. G. Ffrost, a recent arrival, gave them most praiseworthy support by refusing to entertain overtures which were made to him.

Conference with Branch Delegates.—During the year a matter affecting lodge fees in female lodges was brought under notice, and the Council thought it wise to call a meeting of branch delegates in conference to deal with the matter. The meeting was a large and thoroughly representative one, and passed the following resolution:—

> "That a uniform rate, the same as the corresponding rate for male lodges, should be established in all suburbs."

This case well exemplifies the usefulness, in dealing with local matters, of having the Association formed into definite branches. Local conditions affecting practice can be freely discussed, and instead of each member being merely a unit, acting independently of those practising around him, he finds himself an important part of a local organisation which has his own interest as well as the interest of those around him at heart, and to which he can refer, well knowing that his special circumstances of practice will be well understood and appreciated.

Prescribing Chemists.—This is a subject complained of during the year, and one very difficult to meet. The Council has proposed that branches themselves should deal with it in a summary manner by sending out notices to the local chemists notifying them that prescriptions will only be sent to those chemists who give a definite written undertaking not to prescribe. The method of enforcing such a notice might need consideration, but it should be possible to originate a scheme whereby such might be accomplished.

Question of a Paid Canvasser.—The Council has thought it wise to mention this subject in order to elicit discussion. There is no doubt that many men are not in the fold who should be, and the question is how are we to get these men to join? Ought not the Association to use all the means in its power to induce them to join? How often has it occurred that the Council has gone to endless trouble, held meetings, and spent money all to no purpose owing to the action of a non-member over whom it has no control, and who defeats the objects for which the Council and the Association have been steadily working, perhaps, for months? Would it not be wiser to spend a little of this money and some of this trouble to better advantage by exhausting all the available means to get new members? The appointment of a paid canvasser is amongst the means which have not yet been tried.

Naturally the first question which confronts the Association would be the expense of the undertaking. The Association already pays commission on new subscriptions, so that the method of getting new members by commission has, as it were, been sanctioned. The only other question is to whom should the commission be paid? This is really the question on which the Council would invite discussion. Some agents call regularly on all the doctors in the State in the interests of various firms, and it is a question whether a reliable representative of one of these firms should not also act as our agent.

Insurance Rates.—This subject still remains in a very unsatisfactory state, and it seems high time that some strenuous effort should be made to place these rates on some reasonable and sensible footing. Already some of the better-paying offices are contemplating a reduction of their rates in order to compete for new business with the offices paying lower rates. The Council will gladly take any suggestions from this meeting as to reopening this most important question.

Chinese Herbalists and other Advertising Quacks.—It is deplorable that something cannot be done to put down the quacks who prey upon the credulous. One has only to note the amount they spend every year in advertising to gauge the gullibility of the Australian public. It certainly seems anomalous that the public are protected against pickpockets, spielers, etc., and yet these quacks can go on year after year robbing the public, not only of its money, but also of the chances of becoming restored to health. From a public health point of view alone some action should be instituted. It is probable that medical men, though they are forced to be unprotected protectionists, reap good instead of evil from their presence in our midst; but nevertheless the higher ideals of public health and safety should prove sufficient motive for a vigorous protest to the proper authorities. Under existing laws nothing can be done.

Future Policy of the Council.—During the currency of the present year efforts are to be made to get a register of all the lodges in the State, their medical officers, and their rates of pay, as well as the mileage radius and rate. This is intended purely and solely for the information and guidance of the Council, and is not intended for publication in any way whatever, so that there need be no hesitation on the part of any member in furnishing the information. It is also proposed to make an effort to increase the number of branches, and to bring them into efficient working order, and to get the rates and conditions of practice made uniform in contiguous districts, as far as is practicable. Perfect uniformity can hardly be hoped for, but nevertheless glaring anomalies can be rectified.

Dr. G. T. Howard moved the adoption of the report. He considered that the Association had made steady progress, in spite of the apathy displayed by some of the profession. He thought that some movement similar to that at Castlemaine should be instituted here. With reference to medical institutes, it would be well if a fund was established in order to compensate medical men who might be willing, at the instigation of this Association, to resign from or refrain from applying for such appointments. The subscription to the Association might well be increased to £1 1s per annum, half of which should be ear-marked for the purpose. With regard to insurance fees, he did not think that a rigid fee of £1 1s could be charged in all cases.

Dr. Wheeler seconded the adoption of the report, and remarked that he would be glad to see more branch meetings.

Dr. Ramsay Webb believed it would be a good idea to ask the branch secretaries to endeavour to get any non-members in their district to join the Association.

On the motion of Drs. Howard and Harbison, the financial statement was adopted.

The election of three members of Council in place of Drs. Ostermeyer, McAdam, and Downie then took place. The two former, with Dr. A. V. M. Anderson, were nominated and elected. Dr. Downie did not seek re-election.

Mr. H. E. B. Armstrong was re-elected auditor.

Dr. Agnew asked if anything could be done in the way of making the rates paid by lodges uniform in each district?

The Chairman thought it would be well to leave this matter to the branches.

Dr. Murray Morton drew attention to the practice of honorary positions to athletic clubs. Drs. Wheeler and Wills also spoke on the subject.

The chairman reminded the meeting that there was a resolution passed by the Council at the request of members on this subject, and that same would be again published in the annual report.

In moving a vote of thanks to the Council and office-bearers, Dr. Howard thought the Association owed a debt of gratitude to Mr. Syme for the very great amount of time and interest he devoted to the Association, and also to Dr. Officer, who had laid members under great obligations by his vigilant devotion to their interests.

The Border Medical Association.

The Border Medical Association held its second meeting at Wangaratta on March 24th. There were present—Dr. Andrews (Albury), president; Dr. Harkin (Chiltern), Dr. Woods (Albury), Dr. Kennedy (Albury), Dr. Müller (Albury), McCarnell (Wangaratta), Cohn (Beechworth), Schlink (Wodonga), Shortt (Corowa), Cameron (Henty), Patterson (Tallangatta), Boyes (Wangaratta), and Lang (Corowa).

After transacting the business of the society, passing the rules, and electing a committee, consisting of Dr. Harris (Rutherglen), Cohn (Beechworth), and Boyes (Wangaratta), the President gave an address and read a paper upon "Practice now and 35 Years Ago." The members afterwards dined together.

The next meeting will be held at Wangaratta on a date to be fixed in June.

New South Wales Medical Union.

The annual meeting of the New South Wales Medical Union was held at 121 Bathurst-street on March 30th, 1904. The President, Dr. F. H. Quaife, in the chair.

The following gentlemen were declared by the chairman to be duly elected to their respective positions:—

Councillors (10): Drs. A. J. Brady, C. U. Carruthers, P. J. Collins, R. L. Faithfull, J. Foreman, S. Jamieson, B. J. Newmarch, G. E. Rennie, Walter Spencer, P. M. Wood. Hon. treasurer: Dr. W. H. Crago. Joint secretaries (2): Drs. A. Jarvie Hood and J. Macdonald Gill. Hon. auditors (2): Drs. A. M. Gledden and S. H. MacCulloch.

The hon. secretary (Dr. Gill) read the annual report for the year 1903-1904.

Eleventh Annual Report, 1903-1904.

The Council has much pleasure in reporting another successful year in the affairs of the Union. Two hundred and seventy-two (272) members paid the annual subscription; three (3) members, having been absent at the seat of war in South Africa more than a year, had their subscriptions suspended, under the terms of the alteration to rule 9, made in September, 1901; twenty-two (22) have dropped out from various causes, but nineteen (19) new members have been elected. The Council has to record with regret the deaths of Drs. F. Norton Manning and Pickburn. Dr. Manning's name never appeared in the printed list of members issued with the annual report, as he joined the Union in July, 1902, after the issue of the ninth annual report, his death taking place in 1903 before the issue of the tenth. In forwarding his subscription to our hon. treasurer he stated that his object in joining was to express his sympathy with the objects of the Union, and his opinion that it should receive the fullest support of the profession. The local hon. secretaries have continued to perform their duties in a satisfactory manner.

The large sum of £261 19s 2d has been paid to members for legal expenses; four (4) members have been thus assisted by the Union. The first case was a District Court action for "malpraxis," which happily ended in a verdict for defendant with costs; defendant recovered his costs, and was but £5 17s 6d out of pocket, which sum the Council agreed to pay. The second case arose out of a lunacy certificate signed by one of our members; our client was threatened with legal proceedings, which caused him much annoyance; the Council agreed to pay his legal expenses; nothing further was heard of the case. The third case was a threatened action for libel; our member was involved in considerable expenditure; the Council agreed to allow him £50 towards his expenses. The fourth case was one of great importance—in fact, the most important case that has occurred in the history of the Union. The patient sustained a fracture of the tibia and fibula, with much bruising; he was taken to the Parramatta District Hospital, where he was treated by one of the hon. medical officers, a member of the Union; by dint of great care the limb was saved, but with a certain amount of shortening. He afterwards went to the Sydney Hospital, where an attempt was made to rectify this. He finally brought a Supreme Court action, claiming £1000 damages; as he was unable to bring any valid evidence in support of his claim, the Judge nonsuited him with costs. As it was impossible to recover costs from plaintiff, a special meeting of the Union was held in January to decide what assistance should be rendered to the defendant in this case. The meeting decided to allow almost the whole costs, the total sum allowed being £187 19s 8d. The Council first and the special meeting subsequently gave this case the fullest consideration, as it was the first time that a larger sum than £50 had been voted to any one member.

The treasurer's statement shows the funds in hand to be £2276 6s 7d, an increase of £96 on the previous year, which may be considered to be very satisfactory, considering the heavy expenditure.

The report was adopted on the motion of Dr. Gill, seconded by Dr. Spencer.

The hon. treasurer made his financial statement:—and moved its adoption, seconded by Dr. Quaife, and carried.

It was suggested that a circular, including a portion of the annual report with the balance-sheet, directing attention to the advantages to be derived from membership of the Union, be sent to all eligible members of the medical profession residing in New South Wales.

STATEMENT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDED FEBRUARY 29TH, 1904.

RECEIPTS.

	£	s.	d.
March 1st, 1903.			
To Balance	2,179	17	10
„ 272 subscriptions at 21s	285	12	0
„ 19 entrance fees at 21s	19	19	0
„ Interest received	80	11	5
„ 10 Subscriptions, account 1904 ..	10	10	0
„ Amount added for exchange ..	1	0	0
	£2,577	10	3

EXPENDITURE.

		£	s.	d.
By Legal opinions		2	2	0
„ Legal expenses paid to members ..		261	19	2
„ Printing		13	4	6
„ Stamps		5	11	0
„ Exchange, country cheques ..		1	10	0
„ Cablegram and exchange *re* New Zealand debentures		1	7	0
„ Assistant secretary		10	0	0
„ Rent of office		5	0	0
„ Bank charge		0	10	0
„ Balance in banks ..	£2,274 14 4			
„ Balance petty cash ..	1 12 3			
		2,276	6	7
		£2,577	10	3

PARTICULARS OF BALANCE.—Fixed deposit, Union Bank, £750; ditto, Bank N.S.W., £400; Savings Bank of N.S.W ,£486; Government Savings Bank, £25 7s 11d; N.S.W. Funded Stock, £300; New Zealand Government Debentures, £300; current account Union Bank, £28 6s 5d—less unpaid cheques, £15—£13 6s 5d. Total, £2274 14s 4d.

FRED. W. HALL } AUDITORS.
GORDON MACLEOD }
W H. CRAGO, HON. TREASURER.
March 8th, 1904

PRACTICES FOR SALE.

The following vacancies and appointments are available:—Two referees, guinea a case, £3 3s; guarantee £2 10s; fees weekly.—An appointment, N.S.W., £300; private practice allowed; worth £450.—Locum tenens for Queensland, three months' work.—Doctor for Asylum, salary £250.—Another referee, £30 month guarantee.—N.S.W. hospital; salary, £225, and private practice allowed.—Mine appointment, £400 and private practice; worth £600.—Another referee, Queensland, £30 month.—Queensland hospital; salary, £300, and private practice allowed.—Two other referees.—Three qualified assistants, £150, £200, £300, indoor.—About 20 good unopposed openings, some with guarantees of £150 to £300; incomes, £350 to £600.

MR. F. W. LOXTON,
16 O'Connell-street, Sydney.—[ADVT.]

REVIEW OF CURRENT MEDICAL LITERATURE.

OBSTETRICS AND GYNÆCOLOGY.

Maternal Impressions.

Birge (William S.), *Annals of Gynæcology and Pediatry*, October, 1903, vol. xvi., No. 10. The author gives three cases in his own practice :—

1. Mrs. H., in the absence of her husband, had to try and stop the bleeding from the left hand of one of the workmen about her husband's farm, who, by a blow with an axe, had cut off his thumb and two fingers. She was very much upset at the time, and was unable to resume her household duties for several days. Her child, a male, was born minus a thumb and two fingers of the left hand.

2. Mrs. S., during the first two weeks of pregnancy, had suffered very severely from toothache, so much so that she called on a dentist, and asked him to extract the tooth, or pull her head off, "she cared little which." Her child was born minus its right upper jaw of the similar side to the toothache.

3. Mrs. N gave birth to a child which only lived a few minutes. It was perfectly developed, except its head and face. The bones of the face were all ossified. The face was as white as marble, eyes white and wide open, and the face peppered all over with little black spots. Dr. Birge gave it to the nurse to take to another room, and just before he left was asked by the mother if anything was wrong with her child, because, in early pregnancy, coming down late one morning to breakfast, she found sitting at the table a friend of her husband's, "the most dreadful looking man I ever saw." He was blind through the premature discharge of a cannon. His face was sprinkled all over with the powder, and his eyes were wide open and white as a sheet, and for a long time she could not get the sight of the man out of her mind.

Carcinoma of the Clitoris.

Björkquist. (*Festschrift gewidmet Otto Engstrom*, Berlin, 1903.) Carcinoma of the clitoris is a comparatively rare disease. The author gives a detailed account of 67 cases, which he has collected from the literature, and of two cases which were seen in Engstrom's Clinic. He discusses the ætiology of the condition. Injury, masturbation, pruritus and syphilis have been suggested as causes. As regards the theory that masturbation is a cause of carcinoma of the clitoris, he points out that if this were correct we should expect to find this disease more commonly in young women. He finds that in 70 per cent. of the recorded cases the patients have been over 50 years of age. The menopause does not seem to have much influence in its causation.

The diagnosis is sometimes difficult, *e.g.*, when occurring in young patients it may be mistaken for a syphilitic lesion. Here a *probe-excision* will clear up the difficulty. The growth is usually, but not always, a squamous-celled carcinoma. One case of medullary carcinoma is reported, and three of scirrhus. The symptoms are like those of carcinoma of the vulva in general.

The prognosis is grave. In 20 cases death occurred on an average in 15-16 months.

Operative treatment does not give good results. In 20 cases recurrence was noticed before seven months, on an average. In 20 cases death occurred in less than a year after the operation, on an average.

On Methods of Making Abdominal Incisions.

Müller (*Monats. fur Geburts. und Gynak*, Bd. xviii., Ht.4.) Various methods of making abdominal incisions have been tried in order to avoid post-operative hernia, and all are agreed that healing by first intention and suture in at least three layers are of prime importance. The adoption of tier sutures brought down the percentage of ventral hernia in Winton's Clinic from 30 per cent. to 8 per cent. Incisions made outside the median line through the rectus muscle, or by opening the rectus sheath and drawing the muscle aside before opening the abdomen, as practised by Fritsch, Werth, Müller, Howitz, and others, have not resulted in any great improvement on Winter's results. A most important advance, however, was made by Kustner, who made two different incisions at right angles to one another, the first being transverse and near the pubic hair, going through skin and underlying fascia, the second being sagittal, and passing through the linea alba into the abdomen after pulling the skin incision diagonally apart. In no case has a post-operative hernia been recorded after this incision, Kustner having performed it 100 times, and more than three-quarters of the cases having been examined afterwards. Kuhne, Fellenberg, Straumann and others have also reported series of cases without any post-operative hernia. Pfaunensteil has lately introduced a still more important modification of this crucial incision. His first incision is transverse, and in or near the pubic hair, and goes through skin, superficial fasia and fat, and also through the linea alba. The second incision, at right angles to the first, goes through the rest of the abdominal wall between the recti muscles. The importance of this modification lies in a complete understanding of the method of formation of post-operative hernia. The pull of the abdominal muscles is directly outwards from the middle line on the linea alba, so that with the old vertical incision the muscular action constantly tends to separate the incised edges of the linea alba, and so tends to widen the scar transversely With the new incision the muscle pull is in the line of the scar, and so only tends to bring the edges closer together. The sutures in this method are placed in three tiers, first peritoneum and recti together, then linea alba, and finally skin, the last two, of course, being in the transverse direction. Naturally the application of this method is somewhat limited. Pfaunensteil gives as indications the following :—(1) Inflammatory lesions of the appendages, in which conservative operations are to be employed ; (2) displacement of uterus, retroflexion of uterus fixed, and mobile without descent, in which pessary treatment fails ; (3) recent cases of extra-uterine gestation ; (4) medium-sized ovarian cysts and small myomata. Out of 200 cases only one hernia followed, and in this case there was not healing by first intention, as suppuration of the wound and necrosis of the fascia followed an operation upon a case of adnexal suppuration. Only three of the patients died, one from embolism, and two from peritonitis. Pfaunensteil's incision must be preferred to Kustner's on account of the above mentioned advantage in the former with regard to the pull of the abdominal muscles. In Kustner's method there is nothing to prevent the widening of the scar in the linea alba by the muscular pull, because the incision is made vertically in the linea alba.

So-called Chronic Metritis: Its Causes and Symptoms.

Theilhaber (*Archiv. für Gynäkol.*, 1903, Bd. lxx, Ht. 2). Bleeding from the uterus, which weakens the patient by its duration or its rapidity, is usually due to one or other of the following causes :—

1. Changes in the mucosa (polypi and retained placental structures are here included).
2. Changes in the mesometrium (myometrium). (*a*) Insufficient development of the musculature in the years immediately following puberty; (*b*) atrophy of the musculature in after life or after exhausting diseases, etc.; (*c*) increase of connective tissue with retrograde changes in the musculature following frequent pregnancy, chronic disease of the appendages, etc.; (*d*) interstitial œdema of the musculature in acute and subacute disease of the appendages.
3. Hyperæmia of the uterus. (*a*) Through over-development of its vessels; (*b*) through vaso-motor dilatation of the vessels.
4. Presence of foreign bodies, tumours, placental masses, etc., which prevent complete contraction.
5. Ulcerations (cancerous, tuberculous, etc.). Most cases fall under the second and third headings, according to Teilhaber, who next summarises the history of "chronic metritis," showing that it has been regarded as an inflammatory condition secondary to endometritis. He mentions that he and his assistants, Meier, Hollinger, and Torentz, have examined more than 100 uteri, with the result that changes in the mucosa are proved to be rare in cases of menorrhagia and metrorrhagia. Former writers laboured under the disadvantage that in their time uteri were not removed except for cancer. But in these days of hysterectomy for persistent bleeding and other indications, the condition known as chronic metritis can be shown to be a primary hypertrophy of the uterine connective tissue. This, in the writer's experience, is an extremely common condition. There is a decrease of uterine muscle with increase of fibrous tissue, increase in size of the organ, in the size of its cavity, and in its vascularity.

Increase of fibrous tissue is a physiological process just before and after the menopause, and, when normal, the change is not accompanied by increased size of the organ, but by atrophy, anæmia replacing the hyperæmia of disease. But whenever the musculature is not able to control the blood supply, whether at the climacteric or at other times, there is nervous stasis, hypertrophy of connective tissue, and hæmorrhage, with ultimate increase in the size of the organ.

The writer holds that chronic metritis very rarely follows acute metritis, gonorrhœal or peripheral. Neither does he believe that flexions and versions can produce the condition under discussion. Prolapse of the uterus, cancer and fibro-myoma are also disregarded.

The approaching climacteric is the commonest cause of chronic metritis. In women, during the pre-climacteric period, the presence of an enlarged, thickened generally soft, but also sometimes hard uterus, with an enlarged cavity, is extremely frequent. The primary change is atrophy of the musculature—the one unvarying factor in approaching senility of the sexual organs. Physiologically this muscular atrophy is accompanied by stenosis of the vessels and a lessening of the blood stream in the organ. If from any cause this vascular change is delayed until the fibres have atrophied, muscular insufficiency permits of venous stasis and engorgement. This in turn leads to hypertrophy of the connective tissue, which completes the picture of chronic metritis, so called. Pre-climacteric menorrhagia and metrorrhagia are the leading symptoms of this state. Later, as stenosis of the blood-vessels occurs, the bleeding stops, but the uterus remains enlarged. If these patients are watched for years it is found that gradually, after the cessation of hæmorrhage, the whole organ again becomes reduced in size and after its senile atrophy has advanced considerably, often falls into a position of retroflexion. This was Scanzoni's "second stage" of chronic metritis, which is for the most part without symptoms.

In tubal and ovarian disease of long standing a similar hypertrophy of uterine connective tissue often occurs, followed, in this case also, by atrophy after stenosis of the blood-vessels has preceded to some extent. Frequent parturitions produce a similar condition, for normally there is more connective and less muscle in the uterus after every confinement than before it; in fact, the size of the uterus varies directly with the number of pregnancies completed. Over exertion of the uterus in deliveries through contracted pelvis must be recognised as a special cause of muscular atrophy during early reproductive life. Muscular degeneration also follows chlorosis and thus explains the menorrhagia of some anæmic girls. The condition also follows lung disease, typhus, rheumatism, and other exhausting processes. General disturbance of the circulation through heart disease used to be described as a case of chronic metritis. In the writer's experience this is not an important factor. Compensation is usually good until the pre-climacteric period is reached. Then if compensation becomes disturbed, backward pressure doubtless favours uterine hyperplasia.

The main symptoms of chronic metritis, so-called, are hæmorrhage and leucorrhœa. Both may subside for months (a distinction from malignant disease), but even in patients bleeding may be persistent for many weeks. In pre-climacteric cases leucorrhœa may be slight or absent; in younger women it may be excessive. Pain is not an important feature of these cases unless they are due to primary disease of the appendages. Tenderness on pressure is also absent in pure chronic metritis, as are the so-called reflex symptoms, headache, neuralgia, eye symptoms and breast pain. Dysmenorrhœa and sterility are also absent, conception being common when the tubes and ovaries are sound. The size of the uterus varies with the stage of the condition, increase usually being noted at the time when symptoms cause the patient to come under examination. As to the cervix, its lesions as a rule have nothing to do with the condition under discussion. It is clear that the old treatment of chronic metritis by local measures attacking the endometruim is quite worthless. The condition must be dealt with on general lines.

OPHTHALMOLOGY.

Glaucoma.

In *Knapp's Archives* for November there is an abridged translation by Ward Holden of a valuable paper by Professor Wahlfors, of Helsingfors, on this perennially interesting and still unsettled question, as to the nature of the fundamental cause of this puzzling malady. The translation is from vol. xlvii. of the German edition of the *Archives*. It is a lengthy paper, and it is only possible to give here a very brief *resume*.

Wahlfors says we have started with a false conception since we have wished to find the essence of glaucoma in the increased tension, and hence we have hoped that, with the discovery of the cause of the increased tension, we would at the same time discover the actual cause of glaucoma. According to Wahlfors, this is all wrong. He insists, first, that "*increased tension and glaucoma are not identical*;" and, secondly, that "simple and inflammatory (or more correctly, *congestive*) glaucoma are really one and the same disease, and the same morbid process is active in both cases." He does not attempt to discuss the numerous theories of glaucoma that have been advanced, but proceeds to upset the modern theory of retention. While admitting that in inflammatory glaucoma increased tension plays a subordinate and secondary role, he denies that it acts at all in simple glaucoma, where there is often no tension and no retention. Therefore another cause of both varieties of glaucoma must exist, and he seeks for this cause in the functional disturbances that appear in simple glaucoma which is characterised chiefly by the absence of all objective signs. The functional disturbance consists in diminution of central vision, narrowing of the field of vision, and, most important, a diminution of the light sense. The first two of these might occur in optic atrophy, but the reduction of the light sense, manifested by nyctalopia, is a true indication of the nature of the fundamental cause of glaucoma. According to all experience the cause of nyctalopia is a functional disturbance of the rods and cones layer of the retina. Since the layer is not supplied with vessels, and the retinal vessels nourish the inner vessels of the retina only, we must seek the cause of the sub-nutrition in the inner layer of the choroid, whose vessels supply the outer layers of the retina. He maintains that the fundamental cause of the glaucoma is an atrophy of the choroid, agreeing in this with Goldzieher and Fuchs. In many cases the changes in the choroid are visible with the ophthalmoscope, and when not visible, their absence does not exclude an atrophic process, since signs of this are not infrequently wanting in so marked a choroidal process as retinitis pigmentosa. The diminution of the light sense, narrowing of the field, and lowering of central vision are all in perfect accord with the supposition of an atrophy in the chorio-capillaris. He explains the cupping of the disc as a result of the choroidal process. After quoting Locker's experiments as going to prove that intra-ocular pressure can never be high enough to distend the walls or excavate the disc of an eye, if these are healthy, he goes on to say that it is different when the resistance is diminished by a preceding inflammatory process, such as a sclero-choroiditis. He shows how greatly increased tension of long standing often has no effect in causing cupping of the disc. Therefore, he argues, the excavation must be due to the tissues of the disc having lost to some extent their resistance. Only two elements are concerned—the optic nerve fibres, which cannot offer any great resistance, and the connective tissue forming the lamina cribrosa. Although the sclera furnishes some portion of the lamina, the choroid takes some part in its formation. A great number of vessel-bearing tracts with a thick structureless elastica, and a well-defined muscular sheath, branch in the anterior layers of the lamina cribrosa. "The tracts themselves are so richly pervaded with elastic fibres that these in fact make up the principal part of the lamina." Pathological investigations have shown that in glaucomatous excavation a considerable atrophy of this connective tissue framework is found. As the anterior part of the lamina is a direct continuation of the choroid, we may assume that an atrophic process, running its course in the latter, would also involve the elastic tissue, and lead to excavation.

The increased tension, frequent in simple glaucoma, and the chief feature in congestive glaucoma, he explains as follows:—Two factors are generally considered as determining the intra-ocular pressure, viz., resistance of the tunics, and the pressure of the included fluids, which latter is regulated by two factors—secretion and excretion. He gives a third factor hitherto disregarded, viz., the pressure which the choroid exerts in the liquid contents, and particularly in the vitreous. (This appears to explain better than any other theory the fact that in increased tension the lens and iris are pushed forward, a fact which cannot be explained by a uniform increase in the tension of the intra-ocular fluid including the aqueous. (*Periscopist.*) But beside this function of the choroid it has the further one of increasing the lymph circulation of the eye by compressing the vitreous. An atrophic process in the choroid excites a paralysing influence in the muscle network, of which it is in part composed, diminishing the contractility of the choroid, and causing a slowing of the lymph current; and, as a consequence, all the formed constituents of the blood, such as cells, pigments, granules, and the like, are deposited in the channels, gradually blocking them. As the tension goes up the canals may be forced open, and the circulation become normal until they are again blocked, and the increased tension returns (prodromal stage.) If the stopping of the channel of exit is so considerable that the increased tension is not sufficient to force them open, the tension increases more and more, and disturbances in the circulation of the blood are added, depending on pressure on the venæ vorticosæ, which pass obliquely through the sclera, and, valve like, are compressed when the tension rises. As a result we get stasis in the veins of the ciliary body, and iris, and in the circumcorneal veins, exudation into the vitreous, causing more or less pronounced opacity of the media. The tension is thus further increased, and the venæ vorticosæ more compressed. The glaucomatous vicious cycle is completed and the glaucoma does not again retrogress (glaucoma inflammatorium evolutum). The other phenomena of glaucoma are due to increased pressure.

In simple glaucoma the atrophy is chiefly in the inner layer of the choroid (chorio-capillaris), and the further changes leading to increased tension may never arise, or if the process extends into the outer layers of the choroid and caused a paralysis of its muscular network, the tension rises in the manner already described. If the atrophic process begins in the outer layer without involvement of the chorio-capillaris, an acute congestive glaucoma is set up, and here an iridectomy does good because the chorio-capillaris being healthy the retina functionates normally, and the acuteness of vision remains normal, until perhaps later on when the atrophic process has extended to the inner layers.

Wahlfors cannot say what the nature of the atrophic process in the choroid may be, but supposes it to be due to some perverted trophic nerve influence. As a proof of the existence of such an influence, he gives particulars of a case where a healthy iris atrophied completely in 24 hours.

Finally he explains how in his theory of the causation of glaucoma iridectomy, and eserine act beneficially. A satisfactory explanation of the action of iridectomy on the retention theory has never been forthcoming, and Wahlfors shows how it cannot act by opening up the filtration angle. The most probable explanation of the action of iridectomy is that given by Exner. A portion of iris is removed up to its ciliary attachment, and the short arterial twigs which proceed from the major arterial circle of the iris have the opportunity of forming direct anastomosis with the corresponding venous twigs. The arterial current can thus pass directly into the veins without being obliged to pass through the fine capillary network; the resistance in the blood current is thus diminished, and the tension sinks, not only in the short arterial stumps, but also in the entire major circle, and in the choroid. The purpose of the iridectomy is to break the last link in the chain of the vicious circle, which causes congestive glaucoma, and so prevent the venous stasis.

Eserine causes a contraction of the muscles of the eye. Through contraction of the tensor of the choroid, and probably also through its action in the muscular network about the choroid, this membrane is rendered tense, and the tension falls. The pressure on the sclera is relaxed and the mouths of the venæ vorticosæ open. The venous blood escapes from the eye and the tension falls. When the atrophic process has gone so far that the muscular network and the tensor are completely paralysed, eserine has no effect. The contraction of the pupil has no curative effect, but is useful as furnishing an indication that the contractility is present, and we may hope for a favourable effect in the deeper muscular fibres. In simple glaucoma, when the atrophic process is confined to the chorio-capillaris, eserine has no effect, but as it is not possible to say whether the process is confined to one layer alone, we may take it for granted that different layers are affected, though in different degree, and hence in most cases of simple glaucoma, a continued use of eserine acts well, and in many cases prevents increase of tension.

The whole paper will well repay perusal, and is a fine piece of inductive reasoning based for the most part on ascertained facts.

NEUROLOGY AND PSYCHIATRY.

A Case of Cerebral Embolism during an Epileptic Fit.

Broadbent (*Brain*, Autumn, 1903) records the following case as illustrating clinically the experiments of Beevor on Epilepsy, described in his recent Croonian Lectures. A lady, *æt.* 44 years, who had suffered from rheumatic fever when a child, and had the signs of mitral stenosis, had been subject to epileptic fits for seven years; two days before her last illness she had had five fits. In the evening while sitting talking quietly she suddenly was unable to speak plainly and became rigid preparatory to a fit. Instead of the usual fit there was irregular jerking of the right arm and leg, and the mouth was drawn over to the right, but the head was turned to the left; the left arm and leg remained absolutely passive. She passed water during the fit. She remained unconscious for five hours. When seen she was lying on her back in a drowsy state; she could be roused to answer questions, and complained of pain in the right temporal region; her head was straight, but she could not turn it to the left, though she could do so to the right. Her eyes were both turned to the right; she could move them to the middle line, but not beyond it to the left. The left pupil was dilated, the right normal. The tongue deviated to the left on protrusion. The left naso-labial furrow was flattened, the left arm and leg paralysed, and there was also left hemi-anæsthesia and almost complete analgesia. The movements and sensation of the right side were normal, the knee-jerk was absent on the left side, slight on the right. The plantar reflex was present, extensor response on the left side, normal on the right. The left side of the chest moved poorly on respiration, the right much better. The temperature was a degree higher in the left axilla than in the right. She remained in a drowsy condition and passed her evacuations under her. On the third day the movements of the left side of the chest were better; and about the sixth day some movement returned in the left leg, but no knee-jerk could be obtained. She died on the ninth day. At the autopsy a small embolus was found in the right middle cerebral artery just beyond the point of origin. The cortex along the course of the vessel was softened, and on section of the right corpus striatum all the surrounding parts, including a portion of the frontal lobe, were in a condition of extreme softening. The embolus must have blocked the middle cerebral artery just at the commencement of the fit, and it illustrates Dr. Beevor's experiment that "no epilepsy was obtained on the same side as the cortex stimulated when the opposite cortex was removed."

Adams-Stokes Disease.

Kidd (*Lancet*, February 13th, 1904), in a clinical lecture delivered at the London Hospital, gives a short summary of the histories of some cases of this disease, and records a case of his own under his care at the hospital. The disease is really a combination of two symptoms, viz., persistent bradycardia with epileptiform fits. The patient was a woman, aged 58 years, who had been ill for four years, complaining of weakness, fainting fits, vomiting and symptoms referable to heart weakness. The fits are not preceded by any aura; they always have lasted two or three minutes to half-an-hour. She had had from five to six a day, though they may be absent for weeks. She also complains of pain in the region of the heart, which is described as sharp, but the pain does not radiate. She often has the pain without the fits, though at times the pain comes on as the fit is passing off. The pulse varied from 25 to 28. The tension was moderate, and the artery not thickened. The heart's impulse was not felt; the apex beat was in the nipple line. On auscultation a faint systolic murmur replaced the first sound in all areas; it was loudest at midsternum, about the level of the third rib. The urine was healthy. A few days after admission a fit occurred. The patient suddenly cried out, her head was retracted, the pupils were widely dilated, the face was cyanosed, and the pulse imperceptible for 40 seconds. She was quite unconscious, the whole body being rigid and extended. Incontinence of urine took place; as she gradually recovered, retching occurred. On recovering the pulse rate rose to 52. The fit lasted for five minutes. In another fit the pulse was imperceptible for 90 seconds, and the fit lasted for three minutes. She improved considerably under treatment with strychnine, nitro-glycerine, and thyroid extract. Osler has pointed out that slowness of the heart action may cause different grades of cerebral disorder, vertigo, syncope, or epileptiform attacks. Robert Adams, who first described the disease, clearly regarded the slow action of the heart as the primary factor. Huchard, on the other hand, regarded the complaint as the cardio-bulbar form of arterio-sclerosis.

Springsure Hospital, Queensland.— Applications with testimonials will be received by the undersigned till 25th May, 1904, from legally qualified medical men willing to act as Medical Officer to the above Institution. Salary, £250 per annum, with right of private practice; medical officer to find all instruments required. A suitable residence can be rented. Envelopes containing applications to be endorsed "Application for Medical Officer."

For further particulars, apply, CHAS. G. FRYER, Secretary.

CORRESPONDENCE.

London.

(FROM OUR OWN CORRESPONDENT.)

The Chair of Surgery at Cambridge—The Revelations of Radium—The Institute of Medical Sciences—Illegible Prescriptions—The State Registration of Nurses—Paratyphoid Fever—Japanese Scientific Achievements.

Mr. Howard Marsh, the newly-elected Professsor of Surgery, gave his inaugural lecture in the anatomical lecture-room on January 29th. The Vice-Chancellor of the University presided, and there was a large audience. In the course of his remarks, Professor Marsh said the number of students showed that their Medical School was highly successful, and this success depended on the fact that the various departments were presided over and personally conducted by great masters, who had themselves in their generation considerably advanced the sciences which they severally represented. The closing half of the last century must always remain a landmark in intellectual progress of our race, for during these years there was a new departure, which was to issue in what was scarcely less than a transformation. Until that time, intellectual activity had been largely expended in the field of literature and in the cultivation of general learning. Now they had witnessed the advent of modern science, which had touched everything with creative power. No one who had not looked into the matter for himself could have any idea of the amount of work that was being at present done at Cambridge, or of the activity, the vigour, and the success with which their numerous departments were being developed and maintained. The development of their Medical School on the science side was largely due to his predecessor in the chair (Sir G. M Humphry), whose memory would long be kept green amongst them. The changes which had taken place in surgery in recent years were as great as those which had revolutionised so many other departments of human energy. Views which were but lately universally held had been completely and for all time swept away, and discoveries had been made which had fundamentally altered their conceptions, and enabled them to establish new principles, and to elaborate new methods of procedure. These results had been mainly due to the work of Pasteur and Lister—work which would last as long as the discovery of the circulation of the blood by Harvey, or of the principle of the steam engine by Watts. It had been gradually disclosed to them that there was no organ in the body which was not amenable to operation under the aseptic method. Nerves were sewn together, or a destroyed nerve replaced by the spinal cord of a rabbit; and, most astonishing of all, there had been several cases in which patients had recovered from wounds of the heart, which had been sewn up.

Dr. George H. Batten delivered an interesting lecture, under the title of "The Revelations of Radium," to the Röntgen Society at the beginning of January. He first referred to the theories which have been held in regard to the matter from the days of Newton up to the commencement of the nineteenth century, drawing special attention to Dalton's atomic theory, which was promulgated in 1803. Throughout the nineteenth century the undulatory theory of light and heat associated with the atomic theory of matter was almost universally held. In 1888, Hertz demonstrated that radium electricity consisted of large waves in the ether. Then came Professor Bose's discovery of electrical waves as small as three millimetres in size, and Langley's discovery of heat rays as large as 70 micro-millimetres, leaving a gap of about seven octaves only in the scale of radiant energy. This gap is now partially filled by Blondlot's "N" rays. In 1895 Röntgen discovered the "X" rays; and Crookes announced the existence of a fourth state of matter, and showed that in the vacuum tube the current is caused by particles of matter, in a much smaller state of subdivision than ordinary atoms, which form the cathode stream. In 1896, Brequerel found that the metal uranium has the power of spontaneously emitting rays closely analogous to cathode and to Röntgen rays, and in 1898 Schmidt showed that thorium would do the same thing. Later in the same year, M. and Madame Curie succeeded in isolating radium, and found that all the radio-active properties of uranium and thorium were intensified in it at least half a million times. In 1903, Curie announced that the pure radium chloride is self-heating. Dr. Batten pointed out that in the light of these important discoveries, the Daltonian atom, as a fundamental reality, no longer exists, and that the revelations of radium open up the possibility of a new and immense storehouse of energy—the intra-atomic storehouse—beside which the ordinary available inter-atomic and inter-molecular forces are insignificant.

The following letter has been addressed to the Earl of Rosebery:—"My Lord,—We have observed with satisfaction that the Senate of the University of London have lately issued an appeal for funds to build and endow an Institute of Medical Sciences under the control of the University. The positions which we severally hold in connection with the general hospitals of London, and their medical schools, have compelled us, especially of late, to give the proposal that the University should undertake the teaching of the preliminary scientific subjects of the medical curriculum the most serious consideration. We are convinced that the adoption of the recommendation of the Royal Commission in favour of the concentration of the teaching of these subjects in one or more centres has become a matter of urgent necessity in the interests alike of medical education, of the hospitals, and the medical schools—We are, my Lord, yours faithfully, Sandhurst, Chairman of the Weekly Board, Middlesex Hospital; Trevor Lawrence, Treasurer of St. Bartholomew's Hospital; H. Cosmo Bonsor, Treasurer, Guy's Hospital; Sydney Holland, Chairman, London Hospital; J. G. Wainwright, Treasurer, St. Thomas' Hospital; Timothy Holmes, Treasurer St. George's Hospital; H. A Harben, Chairman, St. Mary's Hospital; Thos. Percy Borrett, Chairman, Charing Cross Hospital; J. Wolfe-Barry, Chairman, Westminster Hospital."

The Austrian Minister of the Interior has recently called the attention of medical practitioners to the serious evils caused by illegible prescriptions. He insists that every prescription "must be clearly and legibly written in all its parts." The *British Medical Journal* thinks there are not a few among us who would seem to act on the popular theory that illegible handwriting is a proof of genius. Serious and even fatal accidents have been caused by the careless writing of symbols, or the misreading of the preparation of an active drug which the physician intended to order. An illegible prescription is a danger to the patient, a hindrance, and perhaps a temptation to the pharmacist and a disgrace to the physician

A meeting was held on January 8th of the Royal British Nurses' Association, at which a discussion took place on the question of the introduction of a bill into the House of Commons on the subject of nurses' registration. It is proposed to establish a central board, which shall consist of 10 medical practitioners, three laymen, 10 matrons, and nine fully trained nurses. It is further proposed that within one year from the date of the Act coming into force a nurse may be registered on production of a certificate of two years' training in an institution recognised by the board, or of satisfactory evidence that at the passing of the Act she has been at least five years in *bona fide* practice as a trained nurse, and that she bears a good character. After the time of grace, the period of training necessary is to be extended to three years, and the minimum age is fixed at 24 years. The training must include invalid cooking and sanitation, as well as nursing. The powers which it is proposed to confer on the board comprise, in addition to the regulation of the conditions of admission to the register, of the course of training, and of the conduct of examinations, the regulation, supervision, and restriction within due limits of the duties of nurses; the determination of the conditions under which nurses may be suspended, and the removal of the names from the register for disobeying the rules and regulations laid down by the board, or for other misconduct, the issuing and cancelling of certificates of registration; and the inspection and registration of private nursing homes. Lastly, there are penal clauses in regard to the procuring of certificates by fradulent representation.

The January number of the *Practitioner* is entirely devoted to the subject of enteric fever. The various contributions are more or less interesting, and taken together, they afford an excellent summary of all that is known of the disease. The paper by Professor Hewlett is specially attractive, because it directs attention to a form of disease about which few men in ordinary practice have probably ever heard, and the similarity of which symptomatologically to ordinary enteric fever is so close that the one cannot be distinguished from the other clinically, but only by the due recognition of the infective agent which is responsible for each. Professor Hewlett points out that the process of elaboration of varieties from former more generalised conditions of life, matter, or energy is the inevitable outcome of critical examination, which discovers minute differences where the coarser features, presented to more superficial observation, appeared to be identical. This process of differentiation is taking place in medical as well as other sciences, and it seems not unlikely that many diseases which at present appear to be well-defined entities may ultimately prove to be groups of closely allied phenomena, which are not identical but are capable, by the help of more accurate insight, to be subdivided and referred to separate ætiological causes. As an example of how this process of emancipation has already taken place, the separation by Sir William Jenner of typhoid from typhus fever, and the subsequent establishment of Malta fever as a distinct disease, is quoted. And now, in the further development of scientific elimination, we are brought face to face with a further division of the symptom-complex hitherto known as typhoid fever, by the differentiation of yet another condition, which has been named " paratyphoid " or " paracolon " fever—a fever which simulates typhoid in almost every feature, but which is not caused by the bacillus typhosus. The name, though not the best that might have been chosen, seems likely to become established in medical literature. There are apparently several groups of bacilli which may induce paratyphoid fever, but the differences between them are minute, and not sufficient to make distinct species or even varieties. There are, however, two broad groups, which have been termed by Buxton A and B. They resemble the typhoid bacillus morphologically in that they are multi-flagellate, actively mobile, do not stain by Gram's method, and do not form spores. The blood of the paratyphoid fever patient gives a negative reaction to Widal's test, or agglutinates only in low dilution—1 in 30 or 40; but it agglutinates the paratyphoid bacilli in far higher dilution—1 in 100 or 200, or even more. Paratyphoid fever affects young adults, is most prevalent in autumn, and has a wide geographical distribution. It may simulate the symptoms of typhoid fever in every particular, but is usually a less severe type of disease. In fatal cases, no ulcers of the intestine have been found. It seems not unlikely that some of the recorded cases described as typhoid fever without intestinal lesions have, in reality been cases of paratyphoid infection. The diagnosis of this new disease will probably only be possible under two conditions, which are thus enunciated by Hewlett:—("1) When in a case of supposed typhoid fever the agglutination reaction is absent, or obtained only on low dilution, and further investigation shows the presence of a paratyphoid bacillus which is markedly agglutinated by the patient's blood. (2) When blood cultures are made from all suspected typhoid cases, and are critically examined, as is now being done in some clinics." If, therefore, in a case clinically typhoid, especially one that is running a mild course, the agglutination-reaction with the typhoid bacillus is absent or feeble, the suspicion that we have to deal with, not true typhoid, but paratyphoid infection must, in future, always be entertained. The differentiation has an important prognostic significance, because, so far as can be judged from the hundred or thereabout cases on record, paratyphoid fever is less severe than typhoid fever, and is but seldom fatal.

The Academy points out that the world is in debt to Japan for at least three notable discoveries The oldest of these is the discovery by Kitasato, a Japanese bacteriologist, of the bacillus that causes lockjaw or tetanus, leading to the production of an anti-toxin serum which is now regularly used, and is by far the most efficient remedy we possess for this terrible disease. A Japanese observer named Shiga has recently discovered the bacillus which causes a great many cases of dysentery, and, though that discovery has not yet led to any improvement in prevention or treatment, and will, therefore, not lower during this struggle the death rate from that dire foe of the soldier in war time, no one doubts that this is the first step towards our control of another deadly disease. The third discovery is really more interesting, because it raises newer problems. There is in the body of each of of us a pair of organs known as the adrenal glands, yet unknown to the public, though life could not continue without them. It was a Japanese chemist, Takamine, who isolated from these glands the invaluable substance which they produce for the benefit of the rest of the body. It is known as adrenalin, and nearly every sample of it, if prepared by a good firm, bears upon it the name of that distinguished Japanese. It is the most powerful of all chemical agents for stopping hæmorrhage It will arrest bleeding from the nose when everything else has failed; not that that much matters, for the nose is accessible to mechanical means; but adrenalin has already saved many lives that were oozing away in a thin red stream no surgeon could reach.

Victoria.

Army Medical Corps Dinner.

THE annual dinner of the Australian Army Medical Corps of Victoria was held at the Port Phillip Club Hotel on the night of the 16th March.

General Hutton, Colonel Sir Malcolm McEacharn (Lord Mayor of Melbourne), Captain Collins (the Secretary of Defence), and the Hon. T. H. Payne, M.L.C., were amongst the guests invited. Most of the heads of the military service were present, and a great number of the principal civilian medical men of Melbourne.

After a splendidly arranged dinner had been thoroughly investigated, Surgeon-General WILLIAMS, the Principal Medical Director of the Army Services of the Commonwealth, who occupied the chair, proposed the health of His Most Gracious Majesty the King. This having been duly honoured, he then proposed the health of the guests, coupled with the names of Major-General Hutton, Colonel Sir Malcolm McEacharn (Lord Mayor of Melbourne), and the Hon. T. H. Payne, M.L.C.

Major-General HUTTON, in responding, congratulated the Army Medical Corps on the splendid dinner that had been served, and said that he was glad to see so many of the heads of the profession present. He said that very few could estimate the amount of organisation that had been done during the last few years. They knew that the whole success of an army depended upon its organisation, and this system adopted by the Commonwealth was to be adopted by the British Empire. He had hoped to be able to add the title of "Royal" to the Army Medical Corps of Australia, as a reward for the splendid services rendered in South Africa, and expected that it would not be long before the title would be granted. He regretted the absence of Sir Thomas Fitzgerald owing to illness. He referred to the want of numerous munitions of war, and especially that the Army Medical Corps were short by two bearer companies and two field hospitals, but all this rested with Parliament. He did not think the Red Cross Society would be necessary for a few years yet, but considered the excellent system of army nurses a most useful one. Captain Tate Sutherland was also congratulated upon the nice cut and appearance of his new mess uniform.

Colonel Sir MALCOLM MCEACHARN and the Hon. T. H. PAYNE also replied.

After General Williams' health had been proposed in most glowing terms by General HUTTON and Colonel RYAN, P.M.O. for Victoria, and been duly responded to, the company broke up amidst mutual signs of good fellowship; and we are also pleased to say that several old friends came together again after some years of separation.

MEDICAL PHONOGRAPHERS.

(To the Editor of the Australasian Medical Gazette.)

Sir,—On behalf of the Society of Medical Phonographers, I desire to invite the attention of the readers of the AUSTRALASIAN MEDICAL GAZETTE to the use of shorthand in the study and practice of medicine, and further, to invite all medical practitioners and students interested in the use of Pitman's shorthand to become members of this society.

To anyone who has occasion to make notes in writing, the use of shorthand is an obvious benefit, since it enables him to do his writing in less time and in smaller space, while with equal legibility with longhand, however contracted. To the student who has to make notes of lectures delivered in the classroom, or clinical observations in the wards or the operating theatre, the use of shorthand permits this to be done more easily and more completely than would otherwise be possible. In reading and in actual medical practice, where it is desired to keep a record of what has been gone over, the rapidity and ease of stenography is a great help to good work.

These propositions will probably not be contradicted, but questions will be asked as to the time and labour required for learning to use shorthand effectively. Actual experience may be appealed to for answers. Dr. Fred. H. Spooner, Clapton, London, N.E., writing in the *British Medical Journal* of December 5th, 1896, gives "the actual experience of one who is on the wrong side of 40 and is in general practice. I found no particular difficulty in mastering phonography, although I had not the help of a teacher. . . . . By giving one hour each day to its study, in six weeks I was able to write it with fair ease and to read it. . . . . At the end of three months I had a good knowledge of it, and was using it with advantage. The hour a day was not given all at once; I found many odd minutes I could thus utilise." Dr. Spooner is now editor of the *Phonographic Record of Clinical Teaching and Medical Science*, the monthly paper issued in lithographed shorthand by the Society of Medical Phonographers.

As to the legibility of shorthand when it is written, there is practically universal testimony amongst those who use it that this is all that could be desired. My own experience is that, written at a much greater rate than longhand, it is quite as easy to read. I have on several occasions read essays and lectures aloud in public from shorthand manuscript, and been told afterwards that there was nothing in my manner of reading to indicate that I did not have a typewritten or longhand paper before me.

The Society of Medical Phonographers was founded in 1894 at the instance of Sir William Gowers, in recognition of the benefits he claimed to have received in his work as a medical student and practitioner from the use of shorthand, and with the desire to assist others to the same time and labour saving agency in the pursuit of medical work. He became the first president, and has been followed in office by Sir William Thomson, of Dublin; Dr. E. B. Gray, of Oxford; and Dr. David Ferrier, of London. At present there are nearly 200 members scattered over the world, the list including such well-known names as Peyton Beale, F.R.C.S., Charles Mercier, M.B., Herbert B. Spencer, M.D., and James Taylor, M.D., of London; Prof. G. Sims Woodhead, of Cambridge; Ernest S. Reynolds, M.D., of Manchester; and C. W. Cathcart, M.B., of Edinburgh. In Australasia the local representative is J. F. Rudall, M.B., of Melbourne; while other members are J. C. Verco, M.D., of Adelaide, and W. Martin Smith, M.B., of Dunedin.

The membership of the society is open to all registered practitioners and students of medicine, the annual subscription, due on first January, being for the former 7s 6d, and for the latter 5s, while to save trouble £1 1s is accepted for a three years' subscription. Each member has posted to him monthly the *Phonographic Record*, as well as such extra publications as may be issued by the society from time to time. Amongst such in the past have been "The Use of Shorthand by the Student," "The Use of Shorthand by the Practitioner," "The

Diagnosis of the Nature of Organic Brain Disease," and "The Work of the Life Assurance Examiner," by Sir William Gowers; and "Some Diseases of the Rectum and Anus," by Sir William Thomson, all of them being in lithographed shorthand.

A few years ago, at the instance of the society, the general medical council decided that shorthand should be an optional mark-bearing subject at the preliminary examination.

Applications for membership of the society should be made to the secretary, Dr. Fletcher Beach, Winchester House, Kingston Hill, Surrey, England; or subscriptions may be sent direct to the treasurer, Norman Porrit, Esq., 24 New North-road, Huddersfield, England. I am sure any of the other members of the society in Australasia will be glad to give any further information with regard to the society and its objects and methods to any enquirers.—I am, etc.,

H. COUPER PATRICK, M.B., C.M. (Glas.).

Taree, N.S.W., March 31st, 1904.

A NEW HOSPITAL FOR WOMEN, SYDNEY.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—The directors of the Women's Hospital, Crown-street, Sydney, have lately presented a somewhat remarkable report to the subscribers at the annual meeting, in which they discuss the failure of the late amalgamation of their institution with the Benevolent Society of New South Wales, and present some marvellous statistics of the work of their own hospital. On the statistics I do not wish to comment beyond asking how far cases of eclampsia have been excluded from their institution, and whether Matthews Duncan's four-week period has been applied to their cases?

Regarding the failure of the proposed amalgamation one paragraph of their report reads as follows:—"One of the advantages looked for in the proposed amalgamation was the securing of an up-to-date hospital building for the carrying on of the work in the most efficient manner possible. Failing the completion of those arrangements, however, this matter has been seriously considered by the directors, and they are determined to make special and strenuous efforts during the current year to obtain sufficient funds from the public to purchase a suitable building, centrally situated, which will meet the growing requirements and at the same time relieve the institution of the heavy rent under which it is at present labouring. It is earnestly hoped that by the next annual meeting their efforts will be crowned with success."

From this the inference is intended to be drawn that the Benevolent Society has abandoned its intention or promise to erect an up-to-date hospital for women. Such, however, is not the case. As soon as the site of the old Benevolent Asylum was resumed for railway purposes the directors of the Benevolent Society set to work to carry out the decision arrived at years ago—before the Crown-street institution came into existence—viz., to completely separate the Benevolent Asylum part of their work from the Women's Hospital part. In order to effect that purpose, land was purchased in Quay and Thomas streets, Ultimo, on which a substantial building has now been erected, for an asylum, and the estate known as Flinton, facing Glenmore-road, and comprising nearly six acres of land, was purchased for the purpose of a hospital for women. Extensive alterations of a temporary character were made to the buildings on the estate, and a hospital of over 40 beds thus provided, where excellent work has been carried on for the past two or three years. The plans of the new hospital were approved by the combined hon. medical staff of the two hospitals, and at the present time a portion of the building, consisting of two blocks, is in course of erection, at a contract price of over £22,000.

Unfortunately there has been greater delay than was at first expected; still that did not have so much to do with the failure of the amalgamation, as the fact that one of the officials of the Crown-street institution was *not* to have supreme control. Whether the public will be persuaded to find the money necessary for a second up-to-date women's hospital, in order to justify the *modest* claim of the Crown-street institution to be "the leading Women's Hospital of Australasia" remains to be seen.—I am, etc.,

W. H. CRAGO,

Hon. Surgeon, Hospital for Women, Paddington.

Sydney, March 30th, 1904.

MOUNT GARNET DISTRICT HOSPITAL.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—Intending applicants for medical officer, Mount Garnet District Hospital, should be cautious to have agreement in writing, especially as to right *re* private practice, as present committee desires to limit fees to five shillings for visits or consultations. Hospital salary is only £250, and many well-to-do people avail themselves of hospital treatment as paying patients, getting doctor's services gratis. Population is small and mines and district precarious. Bread over 4d a pound and other provisions in proportion. The local baker controls committee at present.—I am, etc.,

RICHARD RENDLE, F.R.C.S. (Eng.),
Medical Officer *pro tem.*

Mount Garnet,
Queensland, March 23rd, 1904.

HONORARY SURGEONS TO HOSPITALS.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—The movement discouraging free services to race and football clubs is one deserving the hearty co-operation of the profession. It is not that calls on our services in connection with these sports are of any frequency, but it is the tendency such behaviour on our part has of causing an idea to grow in the public mind that our time and talents are as readily given for nothing as for proper pay. There is quite enough charitable work done in a quiet way without our being anxious to increase this work on behalf of these clubs, which are often wealthy. Another matter, too, which the profession should give heed to is the acceptance of honorary surgeoncies to public hospitals. Medical men resident in country districts will appreciate and thoroughly endorse my action in refusing to act as "honorary" to the local hospital. I can now charge a fee, and do so ranging from 10s 6d to £2 2s for giving an anæsthetic, but I don't charge in the case of the very poor. "What is the use?" This action on my part has resulted in my services to the sick in the hospital being more highly appreciated. They used to think that either I got remuneration from the committee, or that I felt honoured in being summoned from my own practice—mostly at most inconvenient hours. After six years as honorary surgeon, I came to the conclusion that harm rather than good resulted to myself as a practitioner. An anæsthetist always takes second seat in the public's eyes. Therefore, brethren, charge where there is a show of a fee. I have never had any trouble about getting paid; I take the precaution, where possible, of getting the fee first. I finally beg to express my surprise at medicals *contesting elections* for honorary surgeoncies in small country hospitals.—I am, etc.,

AQUA.

"AN INTRODUCTION TO MODERN THEORIES OF IMMUNITY."

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—In Professor Welsh's able article on the above subject he gives Wassermann and Takaki's experiments as a crucial test of the truth of Ehrlich's theory of toxins and antitoxins. I have no desire to dispute the theory, but as a test of its truthfulness these experiments have been considerably discredited by later work on the same lines. Besredka (*Annales Pasteur Inst.*, xvii., 1903, p. 138) conducted the same experiments, and his results directly contradicted those obtained by Wassermann and Takaki in many important particulars. On toxin being added to brain tissue, and both ground together, it was found:

1. The mixture *did* separate all the toxin from the supernatant fluid.
2. The saturated emulsion was as toxic as the toxin alone.
3. Antitoxin added to the emulsion removed the toxin from it and neutralised it.
4. The brain tissue was then ready to take up a fresh quantity of toxin as at first.

The conclusion arrived at was that in spite of the affinity of the brain substance for tetanus toxin, the antitoxin is capable of separating it from the tissues.

It may be asked that if such is the case, how can the fact be explained that a patient may die of tetanus even while his blood contains so much antitoxin that it is capable of protecting an animal from an injection of the toxin? My answer to that is that the longer the toxin is in intimate connection with the tissues the more is their vitality impaired. Time is the essence of the contract, and according to the amount and virulence of the toxin will be the period required to so seriously damage the structures involved that they will be beyond repair. Hence a patient may be soaked in antitoxin and die as though he had none, because the damage has all been done before he received the remedy.

These conclusions do not necessarily invalidate Ehrlich's theory.—I am, etc.,

D. MONTGOMERIE PATON.

Melbourne.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—I am obliged to you for the opportunity of making an early reply to Dr. Paton's letter regarding my article on modern theories of immunity, in which he raises two interesting issues, supporting his criticism mainly by certain experiments recently published by Besredka.

That there is room for a difference of opinion regarding the work of Wassermann and Takaki is undoubted, and indeed Dr. Paton, had he so chosen, might have made out a much more damaging case against the interpretation which I had adopted. For as long ago as 1898-99, Marie, Roux and Borrel, Metchnikoff, and Danysz, in the *Annales de l'Institut Pasteur*, partly confirmed and partly traversed the statements of Wassermann and Takaki, and these names do not by any means exhaust the list of hostile critics. But the matter is not easy of decision. There are questions of fact and questions of interpretation which with our present knowledge can be settled only on the balance of evidence, and, although the work of Wassermann and Takaki has been attacked by many acute observers, it has not, I venture to think, been discredited by any. In this view I am supported by many authorities, among whom is to be ranked Ehrlich himself.

I cannot agree that it is a legitimate inference from Besredka's experiments that antitoxin is readily capable of dissevering tetanus toxin from its union with living tissues. It is an accepted fact that in a living animal, after a certain brief interval, antitoxin is powerless to dislodge the toxin, except in very special circumstances. Moreover, there is overwhelming evidence that, long before any damage has been revealed, the toxin may be so firmly bound to the tissues that no amount of antitoxin can avert a fatal issue. It is, therefore, unnecessary to assume, as Dr. Paton does, that the failure of antitoxin in tetanus intoxication is due to the nervous structures being already damaged beyond repair.

It must be remembered that Besredka's work has reference practically to dead tissue, and it is possible that in this fact we have an explanation of the discrepancy between his finding and the phenomena as they appear in a living animal. It is known that the tenure of a nerve cell bereft of its nutriment is exceedingly short, and it is not inconceivable that the affinity of the tissue for toxin may be materially modified by the changes occurring in it after death. It is even possible that in the varying chemical reactions of the dead cerebral tissue at different periods and under different treatment may be found the source of the contradictory results obtained by many of those who have worked along the same lines as Wassermann and Takaki.—I am, etc.,

D. A. WELSH.

The University of Sydney,

OBITUARY.

JOHN URE, M.D. (Erlangen), 1865, M.R.C.S. (Eng.), 1863, L.R.C.P. (Lond.), Brisbane.

We regret to record the death of Dr. John Ure, which took place suddenly in Sydney on March 9th, from angina pectoris, in his 64th year. He received his medical education in Birmingham and in Paris, and won several prizes during his course. He became medical superintendent at the Terrace House Asylum, in York, England, and subsequently practised in York, and afterwards in East Dulwich, in the South East of London. He came to Brisbane 12 years ago and has continued in practice there up to the time of his death. His daughter, Dr. Edith Ure, has been assisting him in practice, and another daughter is in her fifth year of medicine at the Sydney University.

FRITZ WILLIAM WEBB, M.B., Ch.M. (Syd.), 1902, Croydon, Queensland.

Much regret is felt at the death, at the early age of 28 years, of Dr. F. W. Webb, son of Mr. F. W. Webb, C.M.G., of Manly. He was born in Sydney, and educated at the Sydney Grammar School. He passed both junior and senior public examinations with honours. He entered the Sydney Medical School in 1895, and graduated M.B., Ch.M. in 1902. He was resident medical officer at the Sydney Hospital for a year, and then proceeded to Croydon, Queensland, where he was appointed medical officer in charge of the Croydon District Hospital. He was also Health Officer, Government Medical Officer, and doctor to the lodges. He contracted typhoid fever and had been laid up for three weeks in the hospital, and then went out and attended to his duties. He again became an inmate of the hospital, and, becoming gradually worse, died from hæmorrhage on March 19th. The funeral, which took place on March 21st, was largely attended. The deceased was very popular with all classes.

Herbert Blaxland, M.R.C.S. (Eng.), 1877, L.R.C.P. (Lond.), 1878. Hospital for the Insane, Gladesville, Sydney.

We much regret to record the death of Dr. Herbert Blaxland, the Medical Superintendent of the Hospital for the Insane at Gladesville, which took place at his residence at the hospital on April 10th, in his 52nd year. He was the fourth son of the late Hon. John Blaxland, of "The Hermitage," Ryde, and was educated at Macquarie Fields, under the late Rev. G. F. Macarthur, and afterwards at the King's School. He proceeded to London to study medicine, and was a student at University College, London, in the seventies. He obtained the qualifications of the College of Surgeons and Physicians in 1877. He held the resident appointments at University College Hospital, being house surgeon to Mr. Christopher Heath. He returned to Sydney about the year 1879, and entered the Lunacy service, in which he remained up to the time of his death. He was medical superintendent at Callan Park Asylum for serveral years, and was transferred to Gladesville five years ago. He was fond of athletics, and took much interest in the amusements for the patients at the hospital. On April 9th he was at the Randwick races, and it was remarked by a friend that he seemed in remarkably good health and spirits. Next day he attended the church service, and on returning home he complained of headache, and vomited. Shortly afterwards he became unconscious, and died in about 12 hours from cerebral hæmorrhage. He leaves a widow and three sons and one daughter. His funeral took place at the Field of Mars Cemetery on April 12th, and was attended by a large and representative gathering of members of the profession and personal friends. Dr. Blaxland was the senior medical officer in the Lunacy service, and was a highly respected officer, as well as being much respected by patients and attendants of the hospitals in which he served. We desire to express on behalf of the profession our deep sympathy with the widow and the bereaved family.

George Richard Saunders. M.B., Ch.B. (Cantab.), 1889, M.R.C.S. (Eng.), R.C.P. (Lond.), 1890, Wanganui, New Zealand.

We regret to note the death of Dr. G. R. Saunders, which took place on February 25th. Prior to taking up the profession of medicine, Dr. Saunders was headmaster of the Wanganui Collegiate School. He was a man of scholarly attainments, and was one of the foremost athletes of his day. A few months ago Dr. Saunders visited the East, in the hope that the rest and change would restore his impaired health. He returned apparently benefited by the trip, but the improvement was not maintained, and his death took place at the comparatively early age of fifty years.

Medico-Ethical and Medico-Legal.

An income tax deduction disallowed.—At the recent Court of Review, Sydney, Ralph Hodgson, medical practitioner, appealed against an assessment of income tax by the Taxation Commissioners. The appeal was based on the grounds that the taxpayer was entitled under section 28 of the Act to deduct the sum of £50 from the taxable amount of his income as "other provision for his wife and children" in lieu of life insurance. It was urged that section II. of section 28 provided that from the taxable amount ascertained every taxpayer should be entitled to deductions in respect of the annual amount of every premium or sum paid by a taxpayer on the insurance of his own life or that of his wife, or for a deferred annuity or other provision for his wife or children, or in respect of any fidelity guarantee or bond which such a taxpayer was required to provide for the exercise of his profession or employment, provided that in no case should any deduction of this character exceed £50 in the aggregate. It was contended on behalf of the appellant that although this was the first occasion upon which a claim for a reduction had been made upon the ground stated, the intention of the statute clearly was to allow any person exemption from payment from income tax on a sum up to £50 that had been placed as provision for wife or family. The law, it was urged, did not compel a person to effect life insurance, or to purchase an annuity, but gave the widest latitude to make any other provisions that would be adequate for such purpose, and, further, that the statute being one which imposed a pecuniary burden on the people, it should be construed strictly, and that the construction most beneficial to the taxpayer should be adopted. The appeal was dismissed.

Serious charge against a medical practitioner.—At the Sydney Water Police Court last month, Frederick W. Marshall, 42, medical practitioner, was charged that he, at Sydney, on or about January 29th last, did unlawfully use an instrument upon one Ethel Ogilvie, a married woman, with intent to procure the miscarriage of the said Ethel Ogilvie. Walter A. R. Sharp, resident medical officer of the Coast Hospital, Little Bay, said he was acting for Dr. Morton, of Edgecliff, on February 26th. He was called in to see Mrs. Ogilvie and examined her. Found her bleeding profusely, and witness temporarily stopped the hæmorrhage. Witness had the woman removed to a hospital and he there operated upon her. The woman collapsed, and was in great danger of dying. In witness's opinion the woman was suffering from the effects of an abortion, which was incomplete. Witness could not say how that event had been brought about. Accused was tried at the Central Criminal Court on April 5th, and was acquitted.

MILITARY INTELLIGENCE

AUSTRALIAN ARMY MEDICAL CORPS.

Militia.

Bennett, Alfred Henry; Strangman, Cecil Lucius, to be Captains.

Volunteers.

Huxtable, Captain Robert Beveridge, M.B., from the unattached list, to be Major.

Challands, Frederick, M.B.; McDonald, John Edward Fancourt, M.B., to be Lieutenants.

PUBLIC HEALTH.

New South Wales.

Health of the Metropolis.—Dr. W. G. Armstrong reports as follows:—The recorded number of deaths in the metropolis for the month of March, 1904, from all causes was 424, a lower figure than has been experienced in March for many years, and one which is equivalent to an annual death rate of 9·88 per 1000 of the estimated mean population. The chief factor in bringing about the low mortality rate is to be found under the heading of diarrhœal diseases (diarrhœa, enteritis, etc.). The number of deaths attributed to these causes was 44, a figure nearly 50 per cent. lower than the average number experienced during March in the five preceding years (84). The reduction in the mortality from these causes is to be ascribed principally to climatic conditions. The mean temperatures experienced in Sydney during March have been unusually low, and the rainfall has been above the average. Both these factors favour a low mortality from diarrhœa. Of the deaths from diarrhœal disorders, 27 occurred in infants. Deaths from zymotic diseases other than diarrhœa numbered 40. This rather high aggregate is due to the large number of deaths from whooping-cough (16). Other causes of death in this class were: Measles, 1; scarlet fever, 2; influenza, 1; diphtheria, 6; typhoid fever, 8; cerebro-spinal fever, 3; erysipelas, 1; and puerperal fever, 2. Scarlet fever and typhoid fever were below the quinquennial average for the month, but diphtheria was above the same average. Deaths from phthisis numbered 26, as against a quinquennial average for March of 33. Cancer (36 deaths) and respiratory diseases (29 deaths) caused an average mortality. The number of attacks of notifiable infectious diseases notified during the month was 272. Of scarlet fever 91 attacks, of diphtheria 78, and of typhoid fever 103 attacks were notified. No new cases of bubonic plague occurred, and no plague-infected rats or mice were found. The prompt measures which were taken by the State Health Department and City Council upon the discovery of plague rats in Sussex-street in February appear to have been again as efficacious in preventing an outbreak as they certainly were in 1903.

Vital Statistics.—During the quarter ended March 31st there were 3075 births (1556 males and 1519 females), equivalent to a rate of 6·02 per 1000 of population; and the deaths were 1426 (744 males and 682 females), or 2·79 per 1000. These totals are respectively one and three less than the average number registered for the March quarter during the previous five years, and the rates are ·21 and ·09 lower than the corresponding quinquennial rates.

The Plague.—One further case of plague has been recorded since that of the youth Oliver Goldsmith, the patient being a young man working in Sussex-street. Every day a most careful examination is made of a number of rats and mice brought to the board's laboratory. No infected rodents have been discovered for some weeks past until April 15th, when a plague-infected rat was discovered near Darling Harbour Wharf, close to the premises where the last plague patient was working. A communication has been received from the Commissioner of Public Health, Brisbane, stating that Sydney had been declared a clean port, and that all restrictions had been removed. As plague rats continue to be found in Brisbane, the health authorities here do not see their way clear to reciprocate in regard to the port of the northern capital.

Victoria.

The Proposed Consumptive Sanatorium at Rutherglen.—Objections have been raised by the people of Rutherglen to the proposed use of the Viticultural College in that district as a consumptive sanatorium. Mr. Bent, the Premier, says the college has not been used for some time, and as it is four miles distant from the township, and stands in the middle of a big paddock, it is an ideal place for the cure of consumptives; and if all necessary precautions be taken there would be no danger of extension of the disease from the sick to the healthy.

South Australia.

The Home for Consumptives.—At a meeting of the executive committee on phthisis, held on March 28th, it was resolved to forward the following communication to the Premier:—"Sir,—As member of the executive committee appointed by a meeting of the local boards of health for the whole of the State of South Australia, we have to place on record an appreciation of the efforts of the Government to deal with incurable cases of phthisis by the establishment of the home in the grounds of the old lunatic asylum on North-terrace. This arrangement is the agreed complement of the scheme for the treatment of curable cases at Kalyra at the expense of the above mentioned local boards. This treatment of curable cases is now in full operation.—A. Binks, Chairman." At a meeting of the committee of the National Association for the Prevention of Consumption, held at the town hall this month, the following resolution was passed:—"Whilst this meeting is of opinion that the proposed home for advanced consumptives may be regarded as a temporary home, the committee trust that the Government will consider the advisableness of establishing a more suitable home in the hills for such persons at an early date."

Hospital for Infectious Disease Wanted.—A short time ago several cases of erysipelas occurred in the Corporation of Hindmarsh, and, although strenuous efforts were made to have the patients admitted to the Adelaide and Children's Hospitals, the applications were refused. The only alternative was to send the sufferers to a private hospital. This course was adopted; but as the families in which the cases occurred are not in a position to pay for the treatment required, the expense has fallen on the corporation. At a subsequent meeting of the council it was thought to be extremely hard that the corporation funds should have to be called on to meet this expenditure. The corporation subscribes liberally to both institutions where application was made, and it was thought that if the hospitals were unable to treat cases of this sort the Government should provide accommodation for infectious diseases of this kind. To be prepared for such contingencies in future, it was agreed that the hospital authorities be written to concerning the cases, and requiring to know what infectious diseases they were prepared to take in; and that the correspondence be forwarded on to the Chief Secretary for an explanation.

Alleged Adulteration of Wines.—In consequence of the strictures passed by the Adelaide City Coroner (Dr. Ramsay Smith) on some samples of wine, the Wholesale Wine Merchants' Association have written to the Government asking for analyses to be made of South Australian wine. The Premier (Hon. J. G. Jenkins) has directed the Chairman of the Central

Board of Health to have samples of wine collected by the inspector of food and drugs, and submitted to the Government Analyst for examination, as suggested in the letter of 21st ult.

Queensland.

Bubonic Plague.—A man, aged 34 years, a resident of Brisbane, a dealer in bags, bales, etc., on April 8th was certified to be suffering from plague. He was with the least possible delay removed to the Plague Hospital. The patient's condition has improved since his admission to the hospital. The previous case of plague occurred in Brisbane on the 18th February last; therefore a period of 50 days has elapsed between the two cases.

Examination and Destruction of Rats in Brisbane.—Report from 30th March to 7th April inclusive: Number of rats examined at Bacteriological Institute, 354; number of rats infected with plague, 7; number of mice examined at Bacteriological Institute, 269; number of mice infected with plague, nil; number of mice destroyed, 1163; number of rats destroyed, 755; total number of rodents destroyed, 2548. All the patients at Cairns have been discharged and the Plague Hospital closed.

Fifth International Congress of Dermatology, Berlin

THE secretary for Australia (Dr. A. W. Finch Noyes, Collins-street, Melbourne) supplies us with the following, and from him any further information required may be obtained:—

This Congress will take place in Berlin on September 12th, 1904, in the auditory of the Pathological Anatomical Institute of the "Charité."

The fee for membership is fixed at 20 marks, which entitles members to the volume of transactions. Subscriptions may be sent to the general secretary (Dr. O. Rosenthal, Sanitatsral, Berlin W., Potsdamerstr, 121 g.), or to the local secretary.

Members may express themselves in English, French, Italian or German.

The subjects for discussion will be of two orders—those selected by the committee, and those chosen by the individual members of the Congress. Members contributing papers on other subjects must give notice to the secretary-general before July 1st, 1904.

Such papers must not have been published or read before any society before the opening of the Congress.

The debates will be reported in German, but papers in English, French or Italian will be published in these languages.

A museum of models, photographs and drawings, histological and bacteriological preparations, will be opened in the rooms of the Congress; another one of instruments and chemicals will be in a special room.

The principal subjects for discussion will be—

1. Skin affections occurring in connection with disordered metabolism.
2. Syphilitic affections of the organs of circulation.
3. Epithelioma and its treatment.
4. (*a*) The position of the spread of leprosy, and the means taken to combat it since the Leprosy Conference in January, 1897. (*b*) The present position of the doctrine regarding anæsthetic leprosy.

HOSPITAL INTELLIGENCE:

Brisbane Hospital.—The fifty-fifth annual report presented to the meeting of the subscribers to the Brisbane Hospital, held on April 7th, states that there remained in the hospital on December 31st, 1902, 203; admitted during the year, 3586; total number under treatment, 3789; and there were discharged, cured or relieved, 3053; discharged, incurable, or at own request, 217; transferred to Lunatic Asylum or Reception House, 17; died, 293; remaining in hospital on December 31st, 1903, 209. The average stay in hospital was 21 days. The mortality per cent. was under 8·2; but counting only those who survived until the third day, it was 6·7. There were 6770 out-patients at the hospital, and at the Branch Dispensary at South Brisbane the patients numbered 624. The corresponding figures for the previous year were 6571 and 708. At the previous annual meeting the question of the desirableness of adding ladies to the Committee of Management was considered. At a special meeting of contributors held on July 23rd, rules were altered to provide that two ladies should be appointed by the Government and two by the subscribers, the numbers being extended from seven to eleven. *The Honorary Staff.*—The Hon. Dr. C. F. Marks, M.L.C., one of the visiting surgeons, returned to duty in June, when Dr. Hopkins, who had kindly taken charge of his beds, reverted to the outpatient department. In November, Dr. Marks volunteered to conduct the electrical and X-ray work until a permanent officer should be appointed. Dr. Meek, one of the honorory medical officers for out-patients, was transferred from the branch dispensary to the hospital, from which Dr. Crooke retired in October. *The Resident Staff.*—Dr. Mayne, the medical superintendent, was granted leave of absence from February to November, and visited Europe and America. Dr. J. B. McLean, a former resident medical officer, acted as medical superintendent. Dr. O'Brien, the senior resident, retired to serve under the commissioner of Public Health. Dr. Fearnley resigned to enter upon private practice. These vacancies were filled by the appointment of Dr. Kelly and Dr. Eleanor Bourne. *Financial.*—The total receipts for the year were £16,749 7s 5d, and the total expenditure amounted to £17,038 9s 9d. The average cost per bed was £75 15s 10½d. The Röntgen rays apparatus arrived in due course, and has been installed in the ground floor of the administration block, and the X-rays department, now in active operation, is rendering most valuable service both in diagnosis and treatment. A dark room for developing the skiagraphs, and also a laboratory, have been built on the adjacent verandah. The smaller operating room has been equipped and furnished, and is in daily use. The women's medical ward, No. 6, has had a much needed new floor, and has been improved both in light and ventilation. The contract for the long looked for laundry building has been et,land the work is proceeding. The pressing need of a refractory ward has been temporarily met by adapting an old dormitory which was sufficiently large to permit division into two sections for male and female patients. It is but a makeshift, but it is a great improvement upon the building previously used for the purpose, and which had to be taken down to make room for the laundry. *General.*—The Convalescent Home has been kept well occupied during the year; 620 patients have been accommodated as against 423 in 1902. Negotiations have been re-opened both by the Metropolitan Joint Hospital Board and by representatives of the local authorities within the area.

contributing to the maintenance of the Hospital for Epidemic Diseases, with a view to transferring the management of Wattlebrae to the committee of the Brisbane Hospital. The heavy expense incidental to the present sanitary service has led the committee to invite the management of the adjacent hospitals to confer upon the desirableness of co-operating to provide some system of sewage disposal that may be both cheaper and more efficient. A conference has taken place, and there is reason to hope that united action may presently secure a more satisfactory and economical system. The committee have been relieved of the care of the Lock Hospital, which was transferred in July to the new premises in South Brisbane.]

Women's Hospital, Crown-street, Sydney.—At the eighth annual meeting of the Women's Hospital and Dispensary the annual report was presented. Reference was made to the attempted amalgamation of the Women's Hospital with the Benevolent Asylum. One of the advantages looked for in that direction was the securing of an up-to-date hospital building for the carrying on of the work in the most efficient manner possible. The arrangements having failed, the directors have determined to make special and strenuous efforts during the present year to obtain sufficient funds from the public to purchase a suitable and centrally situated building which will meet growing requirements. Statistics for 1903 showed that 293 obstetric cases had been admitted, 22 re-admissions, and 412 had been discharged. The number of births numbered 272 (males 143, females 129). In the outdoor department 1692 patients had been treated. Visits paid by the resident medical officer totalled 121, by medical students 72, by Sister Solomon 499, and by various nurses from the institution 4869. The average cost per bed was £51 16s. The year closed with a deficit of £347 16s 1d; the nurses' and lecture fees amounted to £824 6s. For years past the institution had been largely dependent upon the nurses' fees. The amount received from the public last year only amounted to £327 16s, and £213 from the Government.

Launceston Hospital.—At the last meeting of the Board of Management of the General Hospital, the medical report stated that during February 544 patients had been treated, and there had been 7 deaths. A letter was received from Dr. Elkington, Chief Medical Officer, asking if the board could equip a quarantine station if it were necessary at any time to do so. The secretary was instructed to reply in the affirmative.

The Queen Victoria Homes for Consumptives, New South Wales.—At the sixth annual meeting of the Queen Victoria Homes for Consumptives Fund, held in the vestibule of the Town Hall on April 7th, the sixth annual report of the committee was presented by Dr. Cecil Purser, hon. secretary. It referred to the opening of the sanatorium at King's Tableland, Wentworth Falls, by Sir Harry Rawson, on February 18th, 1903. During the year Mr. T. A. Dibbs had donated £1000 for the purpose of endowing a bed. An open-air shelter at Wentworth Falls, to accommodate one patient, was provided by Mrs. Hugh Dixson. A belt of bushland, partially surrounding the home and buildings, had been underscrubbed, as a safeguard against fire, and an avenue of 100 pines, provided by Miss Fairfax, had been planted in the north-west boundary. The average cost per bed per annum at the sanatorium for the initial ten months had been £61 16s 2d, and the average daily number of beds occupied was 18. Of the 50 cases admitted during the year, 28 were natives of New South Wales, 6 of other Australasian colonies, 13 of United Kingdom, 1 China, 1 Chili, and 1 India. All but three contracted the disease in New South Wales, and the majority of those who were not natives of New South Wales had been resident here for the greater part of their lives. At Thirlmere, the total number of beds available was 42, viz., 14 on the female side, and 28 on the male side. During the year there had been 68 male patients and 45 female patients admitted—a total of 113. A total of 99 were discharged viz., 60 males and 39 females. Of those discharged, 78 were benefited, and 21 were unrelieved; 13 had died. The daily average number of patients during the year was 41, and the average cost per bed per annum had been £41 11s 11d. On December 31st last there were 41 patients remaining in the Home. On December 30th there were 35 suitable applicants awaiting their turn for admission to Thirlmere, and 17 suitable applicants awaiting their turn for Wentworth Falls. During the year 31 cases were refused admission absolutely to Thirlmere, and 43 cases refused admission to Wentworth Falls, owing to their condition being too far advanced. It was the committee's sad duty to report that there had not been any advance made by the Government for the providing of a hospital for those suffering in the later stages. The only refuge still was Liverpool Asylum. The medical report of Dr. McIntyre Sinclair, the resident medical superintendent at King's Tableland, stated that the available accommodation had been fully taxed. The treatment adopted was the modern sanatorium or "open air" method. Under this treatment the patient's general condition, as a rule, soon improved —he put on flesh, lost night sweats, and the lungs began to heal. The improvement was most noticeable in early cases of tuberculosis, and it was for these cases the sanatorium was primarily intended. The majority of the cases admitted to the King's Tableland Sanatorium were in the early or intermediate stages of the disease. Of the 30 cases dismissed out of 50 admitted, 25 were either cases of complete arrest or much improved; and of these 20 were able to return to ordinary working conditions, and five to selected light employment. The average residence required to produce complete arrest was 128 days. Of the 50 cases admitted 41 came from the metropolis and nine from the country; 68 per cent. of the cases were between the ages of 20 and 35 years; and of the 50 admissions, 40 were employed indoors all day, the remaining ten being engaged out of doors. The aannual statement of accounts was submitted by Mr. H. S. Levy, hon. treasurer. The cost of maintenance of the two homes for the year amounted to nearly £3700. Subscriptions and donations for the homes from the public totalled £1432, proceeds from various sources amounted to £370, leaving the balance for maintenance to be drawn from the fund's capital account.

Sydney Hospital.—At the last monthly meeting of the board of directors the accounts for March, amounting to £1988 18s 5d, were passed for payment. Leave of absence for seven months was granted to Mr. John Pope, who is about to visit England. Several small increases in salary recommended by the house committee were approved. After considerable discussion, it was decided to allow the members of the nursing staff who desired it to be trained in midwifery.

Royal Prince Alfred Hospital, Sydney.—At the 21st annual general meeting in connection with the Royal Prince Alfred Hospital held on April 11th; a comprehensive report was presented. The adoption of the report was moved by Sir James Fairfax, acting chairman of the board of directors. He said that during the first year of the hospital's existence 1069 in-patients were admitted, or almost exactly one-third of the number treated this year; 490 patients were discharged cured, as against 2063 last year, while 283 were discharged relieved, as against 623; and the deaths numbered 127, against 346. Of the 1069 patients admitted during 1882-3, only 147 were operated upon, or less than 13 per cent., whereas last year 2160 operations were performed, over two-thirds of the whole being treated in this way. The accommodation has again been taxed to the utmost, and the average for the whole year was 233 beds in occupation daily out of the total of 236. The system of clinical assistants in the out-patients' department has been abandoned after three years' trial in favour of a system of increased honorary physicians and surgeons in the various branches. The hospital had, during the past year, sustained a very serious loss by the resignation of Miss McGahey from the post of matron, after a period of service extending over 12 years, owing to the state of her health. The position of acting matron, pending the appointment of a successor, was being satisfactorily filled by Sister Hunter, the senior sister of the hospital. An important constitutional change had been agreed upon by the board in the direction of making it compulsory for each director to serve upon the house committee in turn, and the effect would be that the directors would generally gain a full insight into the details of management of the institution. The chairman of the board, Professor Anderson Stuart, was at present on a visit to Europe and America, and was making an investigation into hospital methods, etc., elsewhere and conducting extensive inquiries with a view to the fitting up of the new pavilions and operating theatres in the most modern manner. He would also take part in the selection of a new matron if a suitable applicant was found to be available in Great Britain or America. The Queen Victoria Memorial Pavilions were still in course of erection, but the work was not progressing as they had hoped at that time last year, in consequence of the depressed state of the public finances. Still they were progressing, and an assurance had been given that, at the earliest possible moment, the work would be proceeded with with greater vigour. The honorary treasurer, Mr. H. E. Kater, M.L.C., pointed out that in some respects the present financial position did not compare favourably with the past. During the first year of the hospital's existence, and for some years afterwards, the receipts from subscriptions and donations were very much higher, relatively and actually, than for the last year, the total in 1883 being £4077 out of a total revenue of £9349, against a sum of £3153 out of a total revenue of £19,851 last year. The Government subsidy was also proportionately higher in consequence, At the same time the amounts received from patients on account of their maintenance were much lower in 1883, being £717, against £2229 last year, and the amount paid by the Government on account of destitute patients was infinitely less, being only £554, against £9112 last year. The expenditure in 1883 was very much lower proportionately and actually than for last year, being only £7571, against £19,604 last year. The increase was an all-round one, but it appeared to be most noticeable in the matter of provisions and the cost of drugs and surgical instruments and appliances. In the matter of provisions, the cost was £5088, against £4722 in the previous year. The expenditure on drugs was £1391, against £1165 in 1902, and the reason for that was the fact that modern surgery, though undoubtedly more effective, was becoming more expensive, especially in the matter of antiseptics, etc., while our out-patients were steadily increasing in numbers, and they received a large proportion of the drugs dispensed. These facts all showed the necessity for an increased revenue. During the year the endowment fund increased to the extent of £1844, chiefly owing to the payment of a further instalment of £1800 on account of the bequest of the late Mr Adam Guy Flavelle. The nurses' home fund remained in debit to the extent of £1431. During the year the funds at the credit of the hospital have been increased by the receipt of the amount raised for the Queen Victoria Memorial Fund to the extent of over £13,600, but that amount was not available for general hospital purposes, having been specially hypothecated to the purpose of furnishing and equipping the new pavillions.

Balmain Hospital.—At the last monthly meeting of the Committee of the Balmain Hospital, on the motion of Dr. C. U. Carruthers, it was decided that the members of the district should be approached with a view of arranging a deputation to wait upon the Premier to ask for a grant of £1000 for the purpose of carrying out necessary additions to the hospital. The Honorary Medical Staff of the Balmain Cottage Hospital have sent in their resignations to the hospital committee, and that body has accepted these resignations and passed a vote of thanks to the medical officers for their services. In response to the advertisements calling for applications for the vacant posts, the only offers received were from five medical men ineligible for membership of the British Medical Association, and they have been appointed. A great deal of feeling has been aroused locally over the matter, and the doctors have been accused of all sorts of wicked things, and of leaving the poor patients to suffer because of some petty squabble among the doctors.

Hospital for Sick Children, Sydney.—The 24th annual report stated that there were admitted to the general hospital 616, making with the 41 remaining from the previous year a total of 657 patients under treatment. Of this number 330 were discharged cured, 158 were relieved, 50 were discharged unrelieved, 75 died, and on December 31st there were 44 remaining in the hospital. Diphtheria Cottage.—Admitted, 293, making with the 10 remaining from the previous year, a total of 303 patients under treatment. Of these, 244 were discharged cured, 48 died, and on December 31st there were 11 remaining in the wards. Out-patients, 21,925 attendances of 5494 patients. Camden Convalescent Cottage Home.—Number of patients treated, 71. In comparison with the previous year the returns showed an increase of 53 patients treated in the general hospital. The death rate in the general hospital was 11·4 per cent., as against 10·4 per cent. last year. In the diphtheria branch 303 patients were treated this year, as compared with 188 last year; while the death rate was 15·5 per cent., as against 12·02 per cent. in 1902. The out-patients' department showed marked increase, there having been 6287 more attendances and 1969 more patients treated than in the previous year.

The Camden Convalescent Cottage had been fully occupied during the year. The Walker Convalescent Hospital had continued as in previous years to assist the Children's Hospital by receiving convalescent patients. Owing to the difficulties in respect to the Paddington site, the board decided upon a block of land of about six acres at Camperdown. By arrangement with the Government, it took back the dedicated site at Paddington, and granted £5000 towards the purchase of the Camperdown site. The building, which had been designed as a pavilion hospital, would provide eventually for 175 cots. The cost of the whole building would, it was estimated, be about £35,000, of which from £25,000 to £30,000 would be required at present. A princely gift of £5000 had recently been promised by Mr. G. F. Todman. This, with previous donations, brought the building fund up to £13,600. The total amount received during the year from subscriptions, entertainments, legacies, etc., was £3112 11s 4d, as against £4645 18s 1d in the previous year. The latter sum, however, included two amounts of £1000 each for perpetual cot endowments. Included in the sum of £3112 11s 1d were the following: — Hospital Saturday Fund, £330; Miss Ada Crossley, £210; Miss Eadith Walker, £220; Reggie Paxton, £112 12s 1d; Dr. Richard Read, £105; Mr. W. P. Faithfull, £130; trustees of the late W. B. Walford. £50; Mrs. Ronald Campbell, £40; Messrs. Allen, Allen, and Hemsley, £30; Mr. H. C. Kent, £25. The amount received during the year by way of Government subsidy was £2195 6s 2d, also £249 19s 10d towards the cost of the diphtheria branch. Interest on investments totalled £609, and patient contributions, £514. The expenditure amounted to £9495, the main hospital absorbing £5978, the diphtheria branch £1394, the Convalescent Home, Camden, £752, whilst a deposit of £1000 was paid for purchase of new site. The overdraft of £370 2s 11d, brought forward from December 31st, 1902, had increased to £1121 17s 2d. In a very short time, it was hoped, the old overcrowded building at Glebe Point would be a thing of the past. With regard to the diphtheria branch, the building had gradually fallen into a state of grave disrepair. The Board decided to request the Government to take over the treatment of diphtheria cases. The request had been acceded to, and from March 1st, 1904, only urgent cases occurring in the neighbourhood are to be treated, pending their fitness to be removed to Little Bay.

Hospital Saturday at Katoomba.—Hospital Saturday collection in aid of the Nepean Cottage Hospital, Penrith, which took place recently, resulted in the sum of £23 3s 6d being collected, a record for Katoomba.

UNIVERSITY INTELLIGENCE.

University of Sydney.—The following are the results of examinations lately held at the Sydney University: —*Faculty of Medicine.*—First Year—Pass: Elsie F. Browne, Evelyn E. Dickinson, A. J. Dunn, H. Harris, N. C. Larkins, H. Martin, B. V. Nathan, C. M. O'Halloran, H. B. Oxenham, F. G. N. Stephens. Second Year—Pass: Edith M. Adams, W. J. Binns, J. S. Campbell, H. W. Conolly, B. J. Fitzpatrick, J. J. Gilchrist, J. W. Heaslop, E. L. Hutchinson, R. E. McClelland, C. W. Mather, H. M. O. Moran, C. S. Renwick, W. J. White. Third Year—Pass: J. P. Clifford, S. L. Cook, D. D. Gibson, D. H. Graham, J. G. W. Hill, A. H. Moseley, J. B. St. Vincent Welch, C. St. L. Willis. Fourth Year—Pass: E. A. R. Bligh, L. Cowlishaw, K. Hammond, W. C. Mansfield, C. Quaife. *M.D. Examination.*—Materia Medica and Therapeutics—Honours—Class II.: E. C. Hall, thesis, "Eucalyptus oils, especially in relation to their bactericidal power." Midwifery and Gynæcology—Pass: R. B. Wade, thesis, "Ether anæsthesia in children;" T. G. Wilson, thesis, "Pelvic peritonitis and some of its sequelæ."

University of Melbourne.—***Examination for Degree of M.D.***—Commentaries on Cases in Diseases of Women—Pass: A. P. Henzell, K. Hiller, H. I. Holmes, E. V. R. Huckell, W. S. Laurie, J. F. Mackeddie, J. A. D. Nish, S. W. H. Summons. Theory and Practice of Medicine—Pass: A. P. Henzell, K. Hiller, H. I. Holmes, E. V. R. Huckell, W. S. Laurie, J. F. Mackeddie, S. W. H. Summons. Insanity—Pass: A. P. Henzell, K. Hiller, H. I. Holmes, E. V. R. Huckell, W. S. Laurie, J. F. Mackeddie, J. A. D. Nish, S. W. H. Summons.

University of New Zealand.—At the final examination for the degrees of M.B., Ch.B., the following students passed:—Misses A. Adams, E. H. Ridley, W. J. Bathgate, B.Sc., Messrs. Peter Buck, A. Kinder, B.Sc., T. McKibbon, G. Mirams, H. G. Robertson, and J. F. Robertson.

MEDICAL NOTES.

Charitable Bequests and Donations.—The late Mr. F. R. White, of Armidale, New South Wales, bequeathed £1000 to the Royal Prince Alfred Hospital, and £1000 to the Sydney Hospital. Mr. C. H. Poppin has bequeathed £270 to the Brisbane General Hospital. £100 has been received by the Sydney Hospital, as a bequest from the late Mrs. Jane Davy, of Northwood. The late Dr. Robert Tracey Wylde, of the Semaphore, South Australia, has bequeathed £25 each to the following charities:—Home for Incurables, Fullarton; Girls' Orphan Home, Carrington-street; Convalescent Home, Semaphore; Royal Institution for the Blind, North Adelaide. As the result of the recent fete held at Ashfield in aid of the Queen Victoria Consumptives' Homes, the sum realised was £150. A sum of £40 was realised by the luncheon booth and entertainment during the recent show at Liverpool in aid of the Sanatoria for Consumptive Women Fund. At the meeting of the committee it was resolved—"That a cheque be forwarded to the secretary of the Queen Victoria Homes for Consumptives, with a specific request that the amount be used solely for the benefit of poor women afflicted in the early stages of phthisis."

London University Endowment.—In order to develop medical and hospital work, and in connection with the incorporation of University College with the University of London, Sir Donald Currie has given the college £80,000 for the purpose of erecting a school for advanced medical studies, and £20,000 to the college hospital to erect a nurses' home and a residence for medical students attending the poor women of the neighbourhood in their confinements. The Earl of Rosebery, Chancellor of the University of London, and Lord Reay, the President of the University College, in thanking Sir Donald Currie, said his gift would make London the seat of a University worthy of the Empire's metropolis.

The Charity Organisation Society of New York.—Dr. T. Storie Dixson, who has recently returned from a trip to Europe and America, states that the Charity Organisation Society did the best work in New York. This Society was far more comprehensive in its scope than the society bearing the same name here. It covered everything in the way of public sanitation, the result being that the city authorities were able to come in contact with cases, secure expectoration for diagnostic purposes, send out nurses who would instruct the patients in important matters of hygiene, so that even if the patients were not cured their conditions were rendered more tolerable, and their lives prolonged. The society also endeavoured to provide nourishing food, and its sphere of usefulness was amazingly far reaching.

The Birth-Rate Commission.—When a request from the New South Wales Royal Commission on the birth-rate to enforce the Customs regulations against the importation of certain articles used as preventives reached the Minister for Customs, Sir William Lyne had already asked the Sydney Collecter of Customs to seize anything regarded as suspicious. Similar instructions have been sent to the other States.

Sanitary Inspectors' Association.—A visit of inspection was recently paid to the Rookwood Asylum by members of the Sanitary Inspectors' Association of New South Wales and students of the Department of Sanitation, Sydney Technical College, for the purpose of inspecting the septic tank sewage disposal installation in operation at that institution. The superintendent escorted the party over the grounds, the general scope of the operations, the drainage scheme, and the methods of irrigation being pointed out and explained by the way. The dairy arrangements, the milking sheds and bails, the feed and milk rooms required in connection with the 350 gallons of milk used daily by the inmates, were next visited. The party then proceeded to the septic tank, where a member of the Association, Mr. J. L. Bruce (lecturer in sanitary engineering at the Sydney Technical College), gave a brief exposition of the processes and of the principles underlying the biological purification of sewage. Mr. C. Cutliffe, the engineer in charge of the works, also gave information regarding the use of the effluent for irrigation purposes.

"Epler," a new extract of beef, has been placed on the market under the above name, the analysis of which will be found on page 17 of our advertising columns. It retains the natural flavour of beef, and is about one-third cheaper than any other pure extract on the market.

PERSONAL ITEMS.

Dr. Eric Sinclair, the Inspector-General of the Insane in New South Wales, has declined an offer of the appointment of Inspector-General of Lunatic Asylums in Victoria. The salary offered was £1500 per annum, and the tenure of the office five years. We are glad that Dr. Sinclair's valuable services are to be retained for New South Wales.

Dr. Fisher, the senior honorary medical officer at the Branch Dispensary of the Brisbane Hospital, has esigned his office to proceed to Europe.

The vacancy created on the resident staff of the Brisbane Hospital by the election of Dr. Calhoun to the position of resident surgeon of the Lady Bowen Hospital, has been filled by the appointment of Dr. W. C. Grindrod.

Dr. Cargill has commenced practice at 212 Miller-street, North Sydney.

Dr. Watson has resigned the position of Public Vaccinator for the district of Rangitikei, N.Z.

Sir Thomas Fitzgerald returned to Melbourne on April 11th after a visit to Colombo. He has greatly benefited in health.

Dr. P. Sydney Jones was appointed Vice-Chancellor of the Sydney University at the last monthly meeting of the University Senate.

Dr. J. E. Wolfhagen, of Hobart, has taken Dr. D. H. E. Lines into partnership with him.

Dr. L. S. Holmes, on leaving Launceston, Tasmania, to settle in Melbourne, was recently entertained at a social by the friendly societies of the city and presented with an illuminated address.

Professor D. A. Osborne, the recently appointed Professor of Physiology at the University of Melbourne, was welcomed by the members of the University Club on April 8th. The Chancellor, Sir John Madden, presided.

Dr. George Watt, late of Narrandera, has succeeded to the practice of Dr. Kelty at Orange, N.S.W

Dr. Zwar has been appointed by the executive committee of the Victorian Association for the Prevention and Cure of Tuberculosis to represent the association at the International Congress on the subject, which is to be held at Berlin next October.

Dr. A. P. Merrill has left Melbourne on an extended visit to the United States and England, and has resigned the position of Deputy Consul-General of the United States at Melbourne. Dr. W. K. Bouton has been appointed to the position.

Dr. E. A. Marsden, of Dungog, and Dr. C. F. Warren, of Wagga Wagga, have been appointed to the Commission of the Peace in New South Wales.

The Hon. Dr. C. K. Mackellar, M.L.C., left Sydney on March 30th on a trip to England. At the last meeting of the State Children's Relief Board, of which Dr. Mackellar is president, leave of absence was granted to him.

The Hon. Dr. C. K. Mackellar, Dr. A. J. Brady, Dr. G. T. Hankins, and Dr. Scot Skirving have been nominated as representatives of the New South Wales Branch of the British Medical Association at the annual meeting of the parent Association at Oxford in July next.

Dr. Edward Ludowici has returned from Europe and has commenced practice at 1 Castlereagh-street, Redfern, Sydney.

Dr. E. H. Barnes has disposed of his practice at Muswellbrook, N.S.W., and has removed to Mosman, Sydney.

Dr. Graham Robertson has commenced practice in Martinboro, Wairarapa, New Zealand

Dr. Griffiths has been elected alderman for an extraordinary vacancy in the East Ward, Gundagai,

Dr. Scott, who has resided at Bourke for the past nine years, and was medical officer at the hospital and

Government medical officer, was entertained at a social by members of the Bourke Caledonian Association and presented with an illumnated address prior to his departure from the district. Dr. Scott was president of the association for the past six years.

Dr. John James Edgar has resigned his position as public vaccinator for the district of Napier, New Zealand.

Dr. Bronte Smeaton has resigned the appointment of medical superintendent of the Adelaide Hospital.

Dr. Moffitt has resigned the appointment of Government medical officer and vaccinator at Balranald, N.S.W.

Dr. Lines has resigned the appointment of house surgeon to the Hobart Hospital, Tasmania.

Dr. W. D. Langton has resigned the appointment of junior medical officr to the Lunacy Department, New South Wales.

Professor T. P. Anderson Stuart, Professor of Physiology at the Sydney University, has been received in audience by the Prince of Wales. His Royal Highness made many enquiries as to Australia's progress, and recalled numerous incidents in connection with his visit in 1900.

Dr. W. Kington Fyffe, of Wellington, N.Z., left for London on the 25th ult. Dr Fyffe will be absent for nine months.

Dr. Cahill, of Wellington, N.Z., was recently entertained by his friends on his return from a lengthy trip to America and Great Britain.

Dr. C. Maxwell has resigned his appointment as health officer and medical officer at Burketown, Victoria.

Dr. A. H. E. Wall, late house surgeon at Guy's Hospital, London, has entered into partnership with Dr. Porritt, of Wanganui, N.Z.

Dr. Perkins, of Newtown, N.Z., has returned from a visit to England.

Dr. Cameron has commenced practice at Wellington, New Zealand.

Dr. S. G. Strahan has resigned the appointment as resident medical officer of the Benevolent Asylum, Melbourne.

Dr J Wallace Watson has removed from Tumberumba, N.S.W., to Germanton, N.S.W.

Dr. A. G. E. Naylor has removed from Minyip, Victoria, to Foster, Gippsland, Victoria.

Dr. John Ramsay, surgeon-superintendent of the Launceston Hospital, Tasmania, has returned from a tour through Great Britain, America, Egypt, and the Continent.

Professor Watson has returned to Adelaide from his trip to the Far East, and has resumed his work at the University.

An honorary commission has been issued to Dr. Angas Johnson, of Adelaide, to inquire into and report on the causes, treatment, and cure of cancer in the United Kingdom, the Continent of Europe, and the United States.

Dr. F. C. S. Shaw has succeeded to the practice of Dr. Woodward at Wyalong, N.S.W., and has been elected medical officer to the Wyalong and District Hospital.

MEDICAL APPOINTMENTS.

NEW SOUTH WALES.

Costelloe, John, M.B., Ch.M. (Melb.), to be Government Medical Officer and Vaccinator at Balranald, N.S.W., *vice* Dr. Moffitt, resigned.

Florance, Egbert, M.D., to be Visiting Surgeon to the Gaol at Cootamundra, *vice* Dr. Walter Hull.

Hart, John Wesley, M.D., J.P., to be Deputy Licensing Magistrate for the District of Bingara during the absence of John Jamieson, P.M.

SOUTH AUSTRALIA.

Borthwick, E. W., to be Acting Medical Officer of the Adelaide Local Board of Health during the absence on leave of Dr. T. Borthwick.

The undermentioned persons to be on the Board of Management of the Adelaide Hospital, viz.:—

Hayward, William Thornborough, M.R.C.S.
Hill, Alfred William, M.D.
Rogers, Richard Sanders, M.D.

WEST AUSTRALIA.

Blackburne, Dr. George Hugh Spencer, to act for and in the place of the Secretary to the Public Health Board.

Evered, A. C., L.R.C.P., R C.S., to be Quarantine Officer, Albany.

Flynn, Joseph Ignatius, M.B., M S., M.D., to be Acting District Medical Officer, Quarantine Officer, and Public Vaccinator for the Urban and Suburban Districts of Bunbury and Rural District of Wellington, during the absence on leave of D. E. Williams, M.R.C.P.

Frost, Richard, to be Acting District Medical Officer at Lawlers during the absence of W. S. Myles.

TASMANIA.

Elkington, J. S. C., M.D., D.P.H., to be an Inspector under the Vaccination Act.

Roberts, Edward J., M.B. and B.S., to be Senior House Surgeon to the Hobart General Hospital, *vice* Dr. Lines, resigned.

Sprott, Gregory, M.D., D.P.H., to be a member of the Metropolitan Drainage Board.

The following Medical Practitioners to be Port Health Officers for the ports set opposite their names:—

Gregg, James, M.B., Ch.B., *et* B.A.O., Stanley.
Muir, James Millar Mackay, M.B., M.S., to be Port Health Officer for Wynyard and Table Cape.
Rooke, Charles, M.R.C.S., Burnie.
Stuart, George Gordon, L.R.C.P., L.R.C.S., L.F.P.S., Ulverstone.

QUEENSLAND.

Hutton, John Robert, M.B., M.S., to be Medical Officer at Dalby and Visiting Medical Officer of the Jubilee Sanatorium for Consumptives, Dalby, during the absence of Andrew Stewart, M.B., M.S.

Kerwin, Patrick James, L.R.C.P. and S., to be Medical Officer at Port Douglas.

McDonald, James Edward Fancourt, M.B., B.S., to be Acting Assistant Health Officer for the Port of Brisbane, during the temporary absence of Richard Alfred O'Brien, M.B., B.S.

Tarleton, John Willington, M.B. (Syd.), to be Medical Officer at Tenningering (Mount Perry), *vice* John Morris Roe, M.B.

NEW ZEALAND.

The undermentioned gentlemen to be Public Vaccinators for the districts set opposite their names respectively, viz.:—

Baker, James Payne, L.R.C.P. (Edin.), 1876; F.R.C.S. (Edin.), 1879, Tauranga.
Brown, William, M.B., Ch.M. (Edin.), Tauranga.
Bull, Stanley Arthur, M.B. (Lond.), 1895; M.D. (Lond.), 1902, etc., Auckland.
Cameron, Robert Allan, M.B., Ch B. (Edin.), Wellington.
Cantrell, Charles Seaward, M.B , Ch.B. (Edin.), Invercargill.
Clouston, John, M.B., Ch.M. (Edin.), Waiuku.
Clouston, John, M.B., Ch.M. (Edin.), Awhitu.
Fenwick, Percival Clennell, M.R.C.S., L.R.C.P. M.B. (Lond.), Wanganui.
Fookes, Ernest Faber, M.R.C.S. (Eng.), M.B., L.R.C.P. (Lond.), New Plymouth.
Frost, Constance Helen, M.B., Ch.B. (N.Z.), 1900, Auckland.
Gault, David, L.R.C.P., L.R.C.S. (Edin.), Blueskin.
Gordon, Frederick William, M.R.C.S. (Eng.), 1884; L.R.C.P. (Lond.), 1885, Auckland.

Jenkins, Charles Campbell, L.R.C.P., L R.C.S. (Edin.), Kawhia.
Laing, John Adolphus, M.B., Ch.M. (Edin.),1894; M.D. (Edin.), 1897, Auckland.
Lewis, Thomas Hope, L.S.A. (Lond.), M.R.C.S. (Eng.), Auckland.
McCredie, Andrew, L.R.C.S., L.R.C.P. (Edin.), Mahurangi.
McDowell, William Chisholm Wilson, M.B., Ch.M. (Edin.), Auckland.
Mackellar, Edward D. M., M.D., Ch.M. (Glas.), Auckland.
Mandl, Charles Leopold, L.R.C.P., L.R.C.S. (Edin.), Ross.
Moir, James, M.B., Ch.M. (Glasg.), 1875, Auckland.
Morice, Charles George Frederick, M.R.C.S., L.R.C.P., M.D., Grey.
Parkes, William Henry, M.B., Ch.M. (Edin.), Auckland.
Paterson, William Fergus, M.R.C.S. (Eng.), L.R.C.P., M.B., B.Ch., Temuka.
Pentreath, Charles Henry Reginald, M.B., Ch.B., 1896 (Camb.), Auckland.
Reid, Stuart Bathgate, M.R.C.S. (Eng.), 1898; L.R.C.P. (Lond.), 1898; M.B., Ch.B. (Camb.), Auckland.
Ritchie, Thomas, Chatham Islands.
Roberton, Ernest, M.B., Ch.M. (Edin.), 1885; M.D. (Edin.), 1887; M.R.C.S. (Eng.), 1885, Auckland.
Saunders, Alfred Morison, M.B., Ch.M., D.P.H., Cheviot.
Savage, Thomas Copeland, M.B. (Lond.), 1900; M.R.C.S. (Eng.), 1900, etc., Auckland.
Smith, Gilbert Thomas, M.R.C.S. (Eng.), 1881, L.S.A. (Lond.), 1881, Thames.
Wall, Alfred Herbert Edwin, M.B. (Lond. Univ.), M.R.C.S. (Eng.); L.R.C.P. (Lond.), Wanganui.
Winklemann, Charles P., Taupo.
Woodward, Alice, M.B., Ch.B. (N.Z.), 1900, Auckland.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

TASMANIA.

Fell, William Finlay, F.P.S. (Glasg.), 1894, L.R.C.P., L.R.C.S. (Edin.), 1894, L.F.P.S. (Glasg.), 1894, L.M. (Edin. et Glasg.), 1894.

QUEENSLAND.

Culpin, Millais, L.R.C.P. (Lond.), 1902, M.R.C.S. (Eng.), 1902.
Sproule, Robert, M.B., B.S., 1902 (Edin.).
Tyrie, Charles Campbell Baxter, M.B., Ch.M. (Edin.).

BIRTHS, MARRIAGES AND DEATHS.

BIRTHS.

GLEDDEN.—April 13th, at 22 College-street, Hyde Park, Sydney, the wife of A. Maitland Gledden, M.D.—a son.

KATER.—March 26, at Mount Broughton, Moss Vale, N.S.W., the wife of Norman W. Kater, M.B., Ch.M.—a son.

McDONNELL.—On the 18th March, at Rathdonnell, Toowoomba, Queensland, the wife of Aeneas J. McDonnell, M.D., of a son.

ROSS.—April 1, at Hetherdene, 4 Rockwall-crescent, Potts Point, Sydney, the wife of Dr. A. P. Ross, of Condobolin—a son.

TERRY.—March 30, at Waratah, Kiama, N.S.W., to Dr. and Mrs. Hedley Terry—a daughter.

VENTRY SMITH.—March 4th, 1904, at Grafton, N.S.W., the wife of Dr. Ventry Smith—a daughter.

WILSON.—On the 23rd March, at Ebagoolah, Bowen-terrace, Brisbane, to Dr. and Mrs. Frank Wilson—a daughter.

MARRIAGES.

STEVENSON—ARNOTT—February 27, at the Congregational Church, Homebush, Sydney, by the Rev. C. J. Prescott, M.A., John Stevenson, M.B., C.M., F.R.C.S E., Edinburgh, second son of the late John Stevenson, Flaxton, Canterbury, New Zealand, to Florence, youngest daughter of the late William Arnott, of Newcastle, N.S.W.

STUCKEY—DEY.—On April 9th, at the Congregational Church, Burwood, Sydney, Francis Seavington Stuckey, B.Sc., M.B., Ch.M., second son of J. J. Stuckey, Adelaide, to Lottie, elder daughter of the Rev. Robert Dey, of Keith Hall, Burwood, Sydney.

DEATH.

COX.—March 23, at Forbes, N.S.W., Mabel, wife of Allaster E. Cox, M.B., aged 28 years.

BOOKS RECEIVED.

Midwifery for Midwives. By W. Denison Wiggins, M.R.C.S., L.R.C.P., D.P.H. London: Baillière, Tindall & Cox. Sydney: L. Bruck. 1904. Price, 8s 6d net.

Report of the Select Committee on Ventilation appointed by the House of Commons. London: Hickson, Ward & Co., Chesswell-street, E.C.

A Guide to Urine Testing, for Nurses and others. By M. Robinson, L.R.C.P., L.R.C.S. (Edin.). Second edition. Price, 1s net. Bristol: J. Wright & Co.

Dispensing Made Easy, with numerous formulæ and practical hints to secure simplicity, rapidity, and economy. By Wm. G. Sutherland, M.B. (Aber.). Price, 3s 6d net. Bristol: J. Wright & Co. 1904.

The Infectivity of Enteric Fever. By Alex. Collie, M.D. (Aber.). Bristol: John Wright and Co. 1904. Price, 1s 6d net.

List of the Fellows, Members, Extra-Licentiates, and Licentiates of Royal College of Physicians of London.

Diseases of the Gall-Bladder and Bile-Ducts, including Gall-Stones. By A. W. Mayo Robson, F.R.C.S., and J. F. Dobson, M.S., F.R.C.S. Third edition. London: Baillière, Tindall & Cox. Sydney: L. Bruck. 1904.

The Brisbane Hospital Monthly Chronicle. March, 1904.

A Text-Book of Diseases of Women. By B. C. Hirst, M.D. Philadelphia, New York, and London: W. B. Saunders. Melbourne: Jas. Little. Price, cloth, 25s. 1903.

A Text-Book of Clinical Anatomy for Students and Practitioners. By D. H. Eisendrath, M.D. Price, cloth, 25s. Philadelphia, New York, and London: W. B. Saunders. Melbourne: Jas. Little. 1903.

Lectures, chiefly Clinical and Practical, on Diseases of the Lungs and the Heart. By Jas. Alexander Lindsay, M.D., F.R.C.P. (Lond.). London: Baillière, Tindall & Cox. Sydney: L. Bruck. 1904. Price, 9s net.

Manual of Operative Surgery. By H. J. Waring, M.S., M.B., B.Sc. (Lond.), F.R.C.S. Second edition. 1904. Edinburgh and London; Young J. Pentland. Sydney: Angus and Robertson.

Lehrbuch der Hebammenkunst, von Dr. Bernhard Sigmund Schultze, Wirkl. Geheimer Rat, öff. ord. Prof. de Geburtshülfe zu Jena. Dreizehnte Auflage mit 102 Abbildungen. Leipzig: Velag von Wilhelm Engelmann. 1904. Price, 7 marks.

A Practical Guide to the Administration of the Nauheim Treatment of Chronic Diseases of the Heart in England. By Leslie Thomas Thorne, M.D., B.S. (Dublin). London: Baillière, Tindall & Cox. Sydney: L. Bruck. 1904.

Insanity in Everyday Practice. By E. G. Younger, M.D. (Brux.), Senior Physician, Finisbury Dispensary, etc. London: Baillière, Tindall & Cox. Sydney: L. Bruck. 1904.

LETTERS AND OTHER COMMUNICATIONS HAVE BEEN RECEIVED FROM:—

Dr. E. Ludowici, Sydney; Dr. C. C. Cocks, Wentworth; Dr. Roper, Sir Samuel, W.A.; Dr. A. E. Perkins, Sydney; Messrs. Coffill & Co., Sydney; Dr. G. Robertson, Wairarapa, New Zealand; H. B. Allen, Esq., Library Melbourne University; Dr. D. M. Paton, Melbourne; Dr. H. V. C. Hinder, Sydney; Dr. B. B. Ham, Brisbane; Dr. Sydney Jamieson, Sydney; Mr. L. Bruck, Sydney; Messrs. Hannan & Co., Sydney; Dr. R. Rendle, Queensland; Dr. Cecil Purser, Sydney; Dr. H. C. Patrick, Taree, N.S.W.; Dr. A. W. Finch Noyes, Melbourne; the Directors of the Royal Prince Alfred Hospital, Sydney; Dr. G. G. Gillon, Auckland; Dr. A. S. Vallack, Bowral; Dr. Page, Grafton; Dr. J. Lockhart Gibson, Brisbane.

HUDSON'S "EUMENTHOL" JUJUBES (Registered) are a Gum Jujube containing the active constituents of well-known Antiseptics, Eucalyptol, Thymus Vulg., Pinus Sylvestris, Mentha Arv., with Benzo-Borate of Sodium, etc., and exhibit the antiseptic properties in a fragrant and efficient form. Sold by all chemists; tins, 1s 6d. Are Antiseptic, Prophylactic, reduce Sensibility of Mucous Membrane. Mr. W. A. Dixon, F.I.C., F.C.S., Public Analyst of Sydney, after making exhaustive tests, says:—"There is no doubt but that 'Eumenthol' Jujubes have a wonderful effect in the destruction of bacteria and preventing their growth. . . . I have made a comparative test of 'Eumenthol' Essence and Creosote, and find that there is little difference in their bactericidal action."—[ADVT.]

AUSTRALASIAN MEDICAL GAZETTE.

AN INTRODUCTION TO MODERN THEORIES OF IMMUNITY.

By D. A. Welsh, M.A., M.D., Professor of Pathology, University of Sydney.

PART II.

THEORIES OF IMMUNITY FROM INFECTION.

It is essential now to discriminate between two main types of bacterial action in the production of disease and of tissue reaction in the development of immunity. In the small group of diseases represented by tetanus and diphtheria the causal bacilli are remarkably restricted to the site of inoculation, and the lesions due to their presence are almost invariably single or localised, and insignificant. In diphtheria the lesion may derive a fortuitous importance from the accident of its anatomical position, but in the main the specific lesion may be regarded merely as the local manufactory of toxin, which, entering the circulation, becomes attached to certain tissues and may cause serious damage. In artificial culture these bacteria freely elaborate similar toxins which diffuse into the medium and are then readily separable. Repeated introduction of the isolated toxin within a living animal may lead to a condition of immunity by the progressive development of substances which are capable of neutralising the toxin. The details of this process and the theoretical principles involved have already been considered.

A much larger group of pathogenic bacteria appears to have a different mode of action. The specific lesions in which the bacteria congregate are usually either multiple, as in typhoid fever and tuberculosis, or extensive, as in cholera, pneumonia, and plague, or generalised, as in the various forms of septicæmia, and are also usually of grave import. Within the body of a susceptible animal powerful toxins may be elaborated, which are capable of producing profound general disturbance, fever, delirium, coma, prostration, cardiac failure, wasting and widespread degenerative changes in tissue cells. But, when grown outside the body, these bacteria fail to form toxic substances in the medium at least to any great extent, and the injection of the separated bacterial products is of little or no effect either in producing toxic symptoms or in affording protection. It is found, however, that the introduction of the bacteria themselves, at first in a dead or devitalised condition, and later in a living or virulent state, may lead to the evolution of substances which are capable of antagonising the bacteria. The animal may then be said to possess an anti-microbic serum, which may or may not be also antitoxic, and the condition may be called an immunity from infection, as contrasted with the immunity from intoxication attainable in the former group.

Antagonism of tissues to bacteria (bacteriolysis).—When bacteria are introduced into the animal body, not only may antitoxins be called forth, but a host of other anti-bodies also, which are directed mainly against the bacteria, and include substances which disintegrate and destroy them (bacteriolysins), substances which agglutinate them and also immobilise motile forms (agglutinins), and many other bodies known and unknown. Just as in the former group of diseases (tetanus and diphtheria) the animal body becomes immune when it can effectively deal with the toxin, so in the larger group under consideration (typhoid, cholera, plague, etc.) an animal will in all likelihood be sufficiently protected when its tissues can withstand and destroy the invading bacteria. Hence the bacteriolysins form an important constituent of any anti-microbic serum, and, indeed, so far as we yet know, bacteriolysis is the one essential factor in the production of immunity from infection. This process, then, has the first and greatest claim on our attention.

If a guinea-pig receive injections first of dead cholera germs and ultimately of living virulent microbes, its serum acquires the capacity, among many others, which it does not naturally possess, of actually destroying living cholera microbes when brought into contact with them. This destructive (lysogenic) action may take place within the animal body or outside it, and is known as Pfeiffer's reaction. Two other facts have an important bearing. If the serum of a guinea-pig, immunised in this way against living cholera germs, be heated for an hour at 70° C., then it is no longer able to destroy them (C. Frænkel and Sobernheim). Hence some factor essential to the disintegration of the bacteria has been eliminated, probably, since it is lost by exposure to a comparatively low temperature, some relatively unstable anti-body, or component of the anti-body, has been destroyed. But the bactericidal property is not wholly lost, since, if to this heated serum from an immunised guinea-pig there be added fresh serum from an ordinary non-immune guinea-pig, then the mixture recovers its bacteriolytic power (Bordet). In other words the fresh serum from the non-immunised animal appears to contain the substance of which the serum of the immunised animal was deprived by heating, and this substance is essential to the destruction of the bacteria.

Two bodies, then, are concerned in the process of bacteriolysis. One is relatively stable, not readily destroyed by heat, and, in the case under consideration, present only in the serum of the immunised animal. It may be termed the "intermediary." The other is relatively unstable, easily destroyed by heat, and effectively present in the serum of the non-immune animal also. It is known as the "complement."[*] From a multitude of facts which we need not consider in detail, there is reason to believe that the destruction of the bacterium is ultimately due to the complement and not to the intermediary, and that the former cannot act without the intervention of the latter. The intermediary by itself has no bactericidal power, the complement by itself cannot reach the bacterium, but, when both are present, the intermediary fulfils the important part of linking the destructive complement to the susceptible bacterium, and bacteriolysis then follows.

Ehrlich has extended his theory of intermolecular reactions to include this process also. It may be explained on his hypothesis by assuming that the intermediary-molecule has two atom-groups (affinities) of the haptophore order—one capable of combining with corresponding atom-groups (receptors) of bacterial molecules, the other capable of saturation by the haptophorous affinity of the complement. Whereas the complement-molecule possesses two atom-groups neither of which is able to unite directly with molecules of bacterial protoplasm; one of them, however, being analogous to the toxophorous group of a toxin-molecule, can, when the complement is otherwise anchored to the bacterial cell, compass its destruction; the other, being haptophorous, can unite with the corresponding group of the intermediary, and thus indirectly with the susceptible bacterium. Just as antitoxic serum differs from natural serum in containing an excess of antitoxin, which is capable of saturating the combining affinity of the toxin and so of preventing the union of toxin with tissue cell which is the first condition of toxic action, so anti-microbic serum, so far as its destructive action on bacteria is concerned, differs from natural serum in containing an excess of the intermediary, which is capable of combining with the bacterial cell and with the complement and so of binding the complement to the bacterium, which is the first condition of bactericidal action.

Ehrlich accounts for the excess of intermediary in an anti-microbic serum in much the same way as he explains the excess of antitoxin in an antitoxic serum. In the latter case the molecules of toxin, in virtue of their close relationship with the natural nutriment of the cell, become attached to it through the medium of special receptors whose function it is to fix nutrient molecules. The receptors thus engaged with toxin molecules are rendered useless, so that fresh receptors are formed to make good the loss, and, under the repeated stimulus of successive doses of toxin, the receptors may be reproduced in such excess that they are cast off into the lymph and blood stream as molecules of antitoxin. Now, bacteria may also be regarded as akin to certain food-stuffs, but their molecules are presented in a form that does not admit of their being so easily assimilated by the cell as is the case with the more simple toxin. Hence it is assumed that certain cells are equipped with more complex receptors to enable them to deal with such more refractory molecules, and that, for this purpose, the cell-receptors (or amboceptors, as they have been termed by Ehrlich) possess two haptophore groups—the one capable of combining with the molecule to be ingested, the other capable of attaching an independent body, the analogue of the complement, and so of bringing to the aid of the cell a more powerful destructive agent. It may serve to make the hypothesis more intelligible if we speak of the complementary body provisionally as a ferment, and say that the cell-receptor with its two affinities first fixes the recalcitrant molecule and then brings to bear on it a ferment capable of its dissolution and digestion. It is not unreasonable to suppose that in some such way as this certain of the more complex molecules of food-stuffs may be made available for tissue nutrition. It must not be inferred, however, that the anti-microbic complement is in reality a ferment. There is, indeed, much evidence to the contrary, although the result of its action on a susceptible molecule may not be dissimilar to the effect of a ferment on a fermentible molecule.

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[*] The term "intermediary" includes both the immune body and the intermediate body (Zwischenkörper) of Ehrlich, and also the following:—Amboceptor, go-between, mediator, fixative, sensibiliser, sensitiser, preparative, desmon. The term "complement" is synonymous with addiment, alexine, or cytase.

In accordance with this conception of tissue nutrition, the phenomena of immunisation against bacteria may be stated in the following terms. In the presence of a cell capable of dealing with kindred molecules, it may be in presence of a leucocyte, molecules of bacterial protoplasm become engaged with one affinity of the complex cell-receptors, and, resisting dissolution by the complement, they render, for the time being, the cell-receptors useless. Regeneration of fresh receptors to supply the deficiency then occurs, and ultimately, owing to the multiplication or renewed invasion of bacteria, there is an over-production of receptors, the excess being cast off from the cell. Hence there appears in the lymph and blood an increasing number of free receptors which so far retain the character originally possessed by them as integral portions of a living cell as to be equipped with two haptophore groups—the one capable of attachment to molecules of the bacteria, the other capable of linking the destructive complement to them. In other words, the excess of intermediaries in a bactericidal serum consists of the free receptors of cells capable of engaging the bacteria, just as antitoxin molecules are the free receptors of cells capable of fixing the toxin.

It is a fact of the utmost practical importance, and one to which we shall again refer, that in the process of immunisation against bacteria the regeneration of intermediary appears to be independent of the regeneration of complement, and that the over-production of the former proceeds more rapidly and more abundantly than the over-production of the latter. So that the result may be a great excess of intermediary with little or no excess of complement, and that indeed is the usual result. Most anti-microbic sera, therefore, do not contain a sufficiency of complement to enable them to exercise their full bactericidal power. When a non-immune animal receives a dose of the immune serum, the requisite additional complement may to some extent be supplied by that naturally present in its tissues, but the uncertainty of the source of supply of complement constitutes a serious obstacle to the satisfactory therapeutic use of anti-microbic sera.

Since bacteria are destroyed within the animal body through their presumed relationship to the food of certain cells, it is not surprising to find that similar anti-bodies exist naturally in certain sera, probably being stimulated by certain foods. Most natural sera are to some extent bactericidal, natural intermediaries co-existing with natural complements. Nor is it surprising to find that the manner of feeding of an animal conditions its susceptibility to infection, flesh-eaters being more resistant than vegetable-eaters. What is surprising is the fact that the serum of a resistant animal may have little or no bactericidal power, while the serum of a susceptible animal may possess that property in a high degree. A discussion of this anomaly, however, is beyond our scope.

Antagonism of tissues to other alien cells (hæmolysis, and cytolysis in general).—It is natural to enquire if bacterial cells and products are the only bodies capable of evoking this marvellous inter-molecular activity. Since they are supposed to possess this property in virtue of their relationship to the nutriment of certain cells, it is also natural to expect that other bodies, similarly related, should be endowed with a similar capacity. We have already mentioned snake venom, ricin, and even rennin as possessing the power of calling forth appropriate anti-bodies. But the question opens up an immensely wider field, for not only bacteria but many other cells are capable of eliciting this remarkable response from the cells of the living body.

Take the case of the red blood-cells. It has long been known that the blood-serum of certain species of animals exercises a powerful solvent action on the red cells of other species. The serum of dog's blood, for example, can dissolve the red cells of the guinea-pig. This is spoken of as the hæmolytic action of dog's serum on guinea-pig's red blood-cells, and the dog's serum is said to contain a hæmolysin analogous to the bacteriolysins which we have just considered.

A small interchange of blood may prove fatal when effected between unrelated species, as in the example just given, yet no untoward result may follow even a large interchange of blood between closely related species, between the dog and wolf, for example (Landois). The recognition of this fact led to the early abandonment of transfusion from animals to man in surgical practice, though the nature of the hæmolysis was not understood. But the analogy goes still further, for, just as bacteriolysins may be developed in a serum hitherto free of them by injecting appropriate bacteria, so hæmolysins may be produced in a serum hitherto devoid of them by injecting suitable hæmocytes. Thus the serum of the horse may be transfused in large quantities into the rabbit without destruction of the rabbit's red blood-cells, but, if the horse be treated with repeated injections of rabbit's red cells, as in the process of immunisation, then there begins to appear in its serum a hæmolysin for rabbit's blood, so that the serum of a horse thus treated has acquired the property, which it does not naturally possess, of destroying the rabbit's red blood-cells, and transfusion of a small amount is fatal to the rabbit (Belfanti and Carbone). In a definite and perfectly intelligible sense, therefore, the horse may be "immunised" against the rabbit's red blood-cells. It may be stated as a general rule that the repeated introduction of alien hæmocytes within the body of a living animal leads to the development of a serum antagonistic to hæmocytes of the same species as those employed in the injections, or reinforces the antagonism if the serum was naturally hæmolytic to them.

When the process of hæmolysis is further analysed, it is found to be closely analogous to that of bacteriolysis. Indeed, the details of the inter-molecular reactions and affinities concerned were first worked out for hæmocytes, since they could more readily be studied in test-tubes, and then found applicable to bacteria (Bordet). For the dissolution of hæmocytes, as for the disintegration of bacteria, two bodies are required. One is the "intermediary," and the other is the "complement." The further details of the process may be gathered from what has already been said regarding anti-microbic sera, the words "hæmocyte" and "hæmolysis" being substituted for "bacterium" and "bacteriolysis." For not only are the general phenomena of hæmolysis strictly comparable with those of bacteriolysis, but so also are the theoretical explanations of the facts.

This, however, is but the threshold of the inquiry, for, when similar experiments were made with other cells, it was found that they, too, were dealt with by the animal body after a similar fashion, and that similar anti-bodies directed specially against them were produced, the chief condition being that the cells should be taken from an animal of a species different from that into which they were introduced. If an animal receives repeated injections of alien liver cells, then its serum develops the corresponding hepatolysin (analogous to the bacteriolysins and hæmolysins already considered), so that it becomes capable of destroying liver cells of the type used in the injections, and, if introduced into an other animal of the species from which the liver cells were obtained, it is capable of disintegrating the cells of its liver (Delezenne). Similarly the introduction of spermatozoa gives rise to anti-bodies capable of immobilising, though not of actually destroying, such spermatozoa (Landsteiner, Metchnikoff, and others). Injections into an alien animal of leucocytes (Metchnikoff), tracheal epithelium (Von Dungern), nerve cells (Metchnikoff), renal cells (Lindenmann), and thyroid cells (Mankowski) have also been found to produce sera capable of acting on such cells somewhat in the manner of a hæmolytic serum on the corresponding red blood-cells, so that specific neuro-lysins, leuco-lysins, nephro-lysins and thyreo-lysins are developed. Moreover, the mechanism of these destructive actions appears to be similar to that of hæmolysis, the dissolution of the cells being affected by appropriate complements linked to them by appropriate intermediaries. Hence the suggestion has been made that even cancer may be treated by appropriate anti-epithelial sera. These considerations serve to reveal something of the infinite variety and exceeding nicety of adjustment that characterise the inter-molecular reactions elicited by the introduction of alien cells within the animal body.

But the cells of the animal body are continually being destroyed and replaced, and yet the corresponding "lysins" are not produced. Nor has it been found possible by any experiment to produce an auto-lysin, in other words, an agent capable of disintegrating the cells of the animal in which it was produced. If a goat receive injections of the blood of other goats, it may develop a hæmolysin for other goats' blood, but never for its own blood (Ehrlich). The very necessary natural provision whereby autolysins are not produced by the incessant wear and tear of the tissues has been termed by Ehrlich the "horror autotoxicus." But this control mechanism may occasionally fail. Michaeli records the case of a woman who, after an extensive internal hæmorrhage, suffered from hæmoglobinuria, the suggestion being that an auto-hæmolysin was developed by the excessive disintegration of her own extravasated blood (Bulloch). The term auto-intoxication is not unfamiliar, and it may be that self-generated cellular poisons are really responsible for many familiar diseases, including anæmias, hæmoglobinurias, chronic inflammations, intoxications, and cell-degenerations. A most suggestive opening for organo-therapy is hereby indicated.

Antagonism of bacteria to tissues (*intoxication*).—Such inter-molecular affinities and reactions have no meaning apart from the living cell in which they ultimately originate. They are essentially the expression of a vital reaction induced in a living cell by the presence of some alien cell, living or dead, bacterial or animal, and the reactions by which immunity from infection is attained are now recognised to be merely a particular application of a great biological process whereby the living cell is enabled to destroy or digest alien cells. Now bacteria, when they enter the body and multiply in the tissues, are living cells, and the cells of the body are alien to them. Why, then, should not the living bacterial cell react in accordance with this general biological law and produce anti-bodies specially directed against tissue cells, just as certain cells of the body react to bacteria and produce antagonists to them? The suggestion that the invading cell might similarly react to its environment was first made by W. H. Welch in the Huxley Lecture for 1902. It is conceivable that bacterial cells should be equipped, as we assume certain tissue cells to be, with receptors of similar complexity. Such receptors would possess two affinities, one capable of engaging a corresponding receptor of a tissue cell, the other capable of uniting with a destructive complement which would thus be enabled to attack the cell. By repeated engagements some bacterial receptors would be put out of action, and the bacterial cell stimulated to the production of more. Ultimately an over-production would occur and the bacterial receptors be shed, still retaining the property, which they originally possessed as component parts of the bacterial structure, of fixing a destructive complement to the cells of the tissue which called them forth. In other words, the free bacterial receptors would act as intermediaries capable of fixing a hostile complement to tissue cells, just as in bacterlolysis the free receptors of tissue cells may act as intermediaries capable of attaching a destructive complement to the bacteria.

On this hypothesis the profound intoxication which may undoubtedly occur in the group of diseases represented by typhoid, cholera, plague, and pneumonia would depend, not upon the elaboration of simple toxins like those of diphtheria and tetanus, nor upon the liberation of intra-cellular toxins by dead or dying bacteria, though the latter may be contributory to a relatively small extent, but upon the continued life and vital reaction of the bacteria. This conception is much more in harmony with the phenomena of infection than the assumption that toxins are liberated only on the death and disintegration of the bacterial cell. The further fact that cultures of such bacteria are usually of slight toxicity receives also adequate explanation. Regarded in this light the contest between bacteria and their host becomes a race for immunity, the bacteria striving to attain immunity from hostile tissue cells, and the latter seeking protection from the noxious bacteria. Bearing in mind the myriads of bacteria that may be concerned in a given infection, and the fact that they may outnumber the cells of any one tissue of the body, we can realise something of the overwhelming reaction of which they are capable.

The general toxic effects of typhoid bacilli, cholera spirilla, and the like bacteria, therefore, appear to be due to a complex poison of the nature of a bacteriolysin or hæmolysin. The intermediary, as we have seen, is supplied by cast-off bacterial receptors; the requisite complement may be supplied by the bacteria themselves, or may exist naturally in the body of the infected animal, which would then from its own constitution supply the substance which ultimately leads to its undoing. Recent work on snake venom has demonstrated that its mode of action is more complex than that of the simple toxins (diphtheria and tetanus), and is strictly comparable with that of the other bacterial toxins assumed by Welch to be elaborated within the living body. For the work of Flexner and Noguchi and of Preston Kyes shows that the effective constituents of venom are not toxins, as had previously been supposed, but intermediate bodies, which in virtue of their twofold combining affinities have the power of bringing destructive agents (complements) into touch with susceptible tissue cells, the complements being supplied by the victim. The venom by itself is harmless; the complements within the susceptible animal are also harmless, until the introduction of the venom supplies the link by which alone they can operate. That the venom should find the elements necessary to complete its destructive action in the tissue of the affected animal is a phenomenon remarkable as an instance of evolutionary adaption and suggestive as a type of toxic action.

The interest and significance of the action of venom is enhanced by the further fact that it apparently contains an indefinite number of different intermediaries. When one kind of action, say hæmolysis, is compared in animals of different species, it is found that a different intermediate body is required in each case. Certainly in the dog, in the rabbit, and in the guinea-pig, the effective intermediaries of the venom are not interchangeable, and neither are the natural complements concerned. Moreover, in any one animal the venom can bring destructive agents to bear upon many different cells, including hæmal, endothelial, and nerve cells, and this it does probably by the intervention of a special intermediary for each type of cell, the complement also probably differing. How far such intermediaries are interchangeable and how far specific for each tissue is uncertain. From the phenomena which follow snake-bite it would appear that different tissues have a maximum affinity for different intermediaries, since special tissues are selected by the venom when it has freely entered the circulation. But it would also appear that the various intermediaries are capable of saturation by affinities other than those of maximum attraction, since one of the most efficient practical remedies consists in wrapping an elastic bandage round the limb, proximal to the bite, until the intermediaries of the venom, thus confined among indifferent tissues, are more or less fully satisfied and their toxic action has been expended on relatively unimportant structures.

That anti-bodies may be developed from bacteria was demonstrated by the observations of Ainley Walker. He found that bacteria became more virulent when grown on the serum of an animal immunised against them, in other words, that bacteria could thus be immunised against their immune serum. He argued that the immune serum contained an excess of free intermediary, one affinity of which was capable of saturating a corresponding affinity in molecules of the bacterium; that these bacterial affinities, or receptors, being thus engaged with the excess of free intermediary, became useless to the microbe, were regenerated in excess, and ultimately cast off into the medium as free bacterial receptors. Hence, so far as the medium was concerned, it became flooded with free bacterial receptors which were capable of neutralising one affinity of the intermediary, so that it could no longer combine with bacteria, the free bacterial receptors thus acting as anti-intermediaries and diminishing the protective value of the serum. And, so far as the bacteria were concerned, they had by repeated stimulation acquired the power of producing in excess receptors for the intermediary and of discharging such receptors as free anti-intermediaries. When these bacteria were injected into a living animal, they were protected by their own free receptors (anti-intermediaries) from the intermediaries of the animal's body, in other words, they were rendered more virulent. These considerations afford an explanation of the well-known fact that the virulence of a bacterium may be exalted by the method of passage through a series of susceptible animals, as originally designed by Pasteur.

It is well known that very many bacteria in artificial culture may develop bodies capable of dissolving hæmocytes and occasionally leucocytes. The bacterial hæmolysins are of simpler constitution than those we have considered, resembling rather the toxins of tetanus and diphtheria. They derive their interest and importance from their wide distribution, being formed by the bacteria, among many others, of tetanus, diphtheria, typhoid, plague, pneumonia and suppuration, and from the frequent association with these infections of secondary anæmia, and, more rarely, of hæmoglobinuria. In a recent case of tetanus in a boy eleven years old, under the care of Dr. Scot Skirving, profuse hæmoglobinuria set in for three days before death, probably from the presence of the hæmolytic constituent (tetano-lysin), occasionally associated with the neuro-toxic constituent (tetano-spasmin), of crude tetanus toxin, as described by Ehrlich and Madsen. The further fact that even saprophytic bacteria may elaborate powerful hæmolysins is most significant in view of Hunter's theory of oral sepsis and intestinal intoxication in relation to pernicious and other obscure anæmias (Welch.)

MYASTHENIA GRAVIS.

By **George E. Rennie, M.D., M.R.C.P. (Lond.), Assistant Physician Prince Alfred Hospital, and Tutor in Medicine University of Sydney.**

THE two cases whose histories I present to you this evening illustrate very well a recent chapter in the history of medicine. After Trousseau had described with all his clinical acumen the condition known as primary labio-glossal pharyngeal paralysis with its pathology and morbid anatomy, cases were occasionally described in which the symptoms of bulbar paralysis were present in a mild degree, and in which post-mortem examination failed to reveal any macroscopic or microscopic lesion. These cases were subsequently spoken of as "asthenic bulbar palsy." The symptoms were considered to be due to a condition of weakness of the muscles of the mouth, tongue, lips and pharynx and larynx, not dependent upon any gross organic nerve or muscular lesion. Soon, however, it began to be recognised that in some of these patients the muscular asthenia was not confined to the bulbar muscles, but was also present in varying degrees in the muscles of the trunk and limbs, and this lent a new interest to the study of the disease. Sir Samuel Wilks described the first case of this nature in the year 1877, and in the following year Erb described another case very fully and discussed the disease generally. Up to the year 1900 not more than 60 cases had been recorded, and to show that it is a rare disease it may be mentioned that Erb did not see a second case for twenty years after he had described his first one.

I wish to record these two cases of a rare disease, the first I have come across (although I have been carefully looking out for one for some years past), and the first I believe to have been recorded in Australia.

Case 1.—The first case is an illustration of asthenic bulbar paralysis. C.R., a youth of 19 years of age, came to my out-patient department at Prince Alfred Hospital in February, 1903, and was admitted to the hospital under my care. He had been ill for about 18 months, complaining of difficulty of swallowing and drooping of the eyelids.

Previous History.—He had had good food and clothing, and had been engaged up to nine months before admission in a tobacco factory. He had worked about nine hours a day in "steaming" and "drying." He smoked rather heavily, chiefly cigarettes; he took no alcohol, and had not suffered from any form of venereal disease. His previous health had been quite satisfactory, and there was no history of any preceding illness.

Family History.—His father died of Bright's disease; his mother suffers from heart weakness, but there is nothing else in the family history worth noting. No similar complaint had been known in the family.

Progress of the Illness.—His first trouble was with swallowing his food. This began very gradually, and then increased, so that at the time of admission to hospital he could only take liquid food, and at times he would get regurgitation of this through the nose. About nine months ago he noticed that his eyes were becoming heavy and that the eyelids began to droop. Otherwise his sight was good. Six months ago his voice began to change, and become nasal in character. From this time onward he got easily tired, short of breath, and could only run twenty or thirty yards, and would then fall down and become more or less cyanosed.

Present condition.—He can lie comfortably in bed in any position and can raise himself up in bed unaided. He is well nourished, temperature normal, pulse regular, but rather slow, varying from 56 to 68; respirations 24.

Nervous system.—He is quite intelligent, and shows no loss of memory. He sleeps well, and has no headache or pains of any description. His speech is normal, but his articulation varies from time to time. In the morning he articulates well, but after a little conversation he begins to talk in a nasal tone. After another period of rest he regains his natural voice. The special senses are quite normal. The pupils are equal, moderately dilated, respond to light and on convergence. There is marked limitation of movement of the eyeballs, particularly in outward movements, both external recti showing a distinct weakness. The movements in other directions are not quite so free as in a normal condition. There is marked ptosis of the left eyelid and to some extent also of the right. There is occasionally slight diplopia. The movements of the face are impaired in all directions, so that his face is somewhat expressionless. The occipito-frontales are somewhat contracted to compensate for the ptosis. When asked to show his teeth the angles of the mouth are drawn aside to a less extent than normal; when asked to smile, instead of the action of the zygomatici being marked there is an obvious action of the elevators of the upper lip, so that he presents in a typical manner the appearance of the "nasal smile" described and figured so well by Sir W. Gowers. He has no difficulty in moving his jaws or in masticating his food, and the sensation of the mouth and face is normal. He can swallow fluids, but solid foods seem to stick in his throat. The soft palate responds actively to stimulation, but does not contract on phonation. The tongue can be protruded easily and fully in the middle line; the lips can be compressed and protruded, but he is unable to whistle. He does not tire easily on eating or speaking, but his voice alters after a short time in the manner above described. The muscles of the trunk and limbs are fairly strong, and all movements can be performed. There is no loss of sensation, and no muscular wasting.

Reflexes.—The jaw jerk was absent. The elbow and wrist jerks were well marked; knee jerks exaggerated, no ankle clonus; plantar reflex showed the flexor response on both sides. The reflexes did not become exhausted on repeated stimulation.

Electrical Reactions.—When examined with the Faradic current, the muscles of the arms did not show any exhaustion until a long interval; the muscles of the legs became exhausted in a much shorter time. This exhaustion of muscle on repeated Faradic stimulation is known as the "myasthenic reaction," and is diagnostic of this disease.

There was nothing else of note in his condition on admission, and the urine was normal in character. He remained in hospital for six weeks, and was treated with hypodermic injections of strychnine, and with codliver oil. He improved considerably, his ptosis became much less marked, his opthalmoplegia disappeared, and his power of swallowing improved so much that he was able to swallow solid food without any apparent difficulty. He, however, lost nearly a stone in weight, though his general health appeared to be very good, and he took his food well. He was discharged from the hospital much improved, and I have since lost sight of him.

In this case the only apparent etiological factor was excessive cigarette smoking, but considering how common this habit is, it seems rather difficult to believe this to have been the real cause of the disease. No other cause could, however, be ascertained in the case. There was absolutely no history of any antecedent sore throat.

Case 2.—The second case is an example of the more complete disease, myasthenia gravis, and conformed in every respect to the classical account of this disease, even to his dying suddenly in an asphyxial attack, three weeks after he first came under my observation.

G.T.C., a single man, aged 27 years, farmer, was sent to me by Dr. Lee of, Wollongong, in February, 1903, and remained under my care in a private hospital up to the time of his death. His father gave me the following particulars about him:—He had always been a steady man; had never taken alcohol to excess, and had not had any venereal disease. The family history was good. He had been home in the country for about a month, but before that he had been living in Sydney and riding as a jockey in the Randwick races. For the last two years he had been taking thyroid tabloids to reduce his weight; his father stated that he had had taken enough to reduce his weight by 18 pounds in the course of 48 hours. (I rather doubt if this be possible.) Some two or three months before I saw him he began to get drooping of the eyelids. Shortly afterwards he had a fall from a horse, his foot caught in the stirrup, and his head was dragged along the ground for some 10 or 15 yards, but he appears to have felt none the worse for this fall at the time. But from this time he seems to have got rapidly weak. He got attacks of difficulty of breathing and swallowing, and became more or less cyanosed. He then began to get weak in the legs and arms; he was able to walk along level ground, but if he stepped down two or three inches he would fall down. He had been unable to do anything for himself for 14 days before I saw him.

Condition on admission.—He was lying in bed on his back, unable to raise himself into the erect posture, or support himself in that position unless his legs hung over the side of the bed. He could not turn over in bed without considerable difficulty. He was fairly well nourished. Temperature and pulse normal.

Nervous system.—He was quite intelligent and had no pains in the head or any part of the body. His special senses were normal.

The pupils were moderately dilated, the movements of the eyeballs were limited in all directions; there was marked diplopia, and ptosis of both eyelids, more on the left side than on the right. He could close the eyes completely, but could not offer the slightest resistance to them being forcibly opened. The occipito-frontales were in constant state of over-action to compensate for the ptosis. The face was rather expressionless, and all movements of the face were restricted. He could close the lips, but could not whistle. On showing the teeth the angles of the mouth were drawn aside to only a slight extent. On smiling, the "nasal smile" was well marked. He could not swallow anything when lying down in bed, and could only swallow fluids with difficulty. Mucus accumulated in the throat, and it was with difficulty he could clear his throat; he could only take fluids in small quantities at a time. The voice was much altered in character; at times it was almost impossible to understand him, at others his speech though nasal in tone was quite intelligible. His voice always altered after he had spoken for a short time. He was quite unable to masticate or bite anything solid. His tongue could be protruded in any direction with ease, and there was no loss of sensation about the face or mouth. There was no palatal reflex.

His muscular power was much impaired, in some muscles more than in others, and always after any exertion the muscular power was much weakened. His neck muscles were so weak that he could not support his head on the trunk for any time, and on being raised up into the erect position his head would drop back. The grasp in both hands was feeble, though he could close the hands, and all the movements of the intrinsic muscles of the hands were retained. The movements at the wrists were feeble. At the elbow joints flexion was stronger than extension, and the triceps was distinctly weaker on the left side than on the right. The movements at the shoulder-joints were weak in all directions. The movements at all joints in the legs were feeble and easily exhausted. The deep reflexes were all active, and did not appear to become easily exhausted. The plantar reflexes were flexor in type. On testing the muscles with the Faradic current the typical myasthenic reaction was obtained in the muscles of both arms and legs. In other respects he was a healthy man, heart lungs, kidneys, etc., being all healthy.

He was fed up as much as possible (but the feeding of these patients is a matter of difficulty, as the use of the stomach or nasal tube is not permissible in consequence of the great danger of fatal asphyxia or syncope during the process). He was given nutrient enemata and hypodermic injections of strychnine, but he remained in much the same state, with varying periods of slight improvement and relapse. At last his breathing became difficult, and the accumulation of mucus in the throat troubled him very much. After struggling all night, and getting no relief from hypodermic injections of strychnine he became very cyanosed, and died quite suddenly. Unfortunately I was unable to obtain a post-mortem examination.

There can be no doubt at all about the diagnosis of this case. It is interesting that we have a possible cause of the disease in the use of large amounts of thyroid gland tabloids. It is, of course, possible that this may have had some share in determining the myasthenia, but we must remember that one case is reported to have been cured by the use of thyroid gland.

As regards the diagnosis of myasthenia gravis, there can be no difficulty if one is fully alive to its existence and its symptomatology. Diphtheritic paralysis, which in some respects resembles it closely, is distinguished by the non-variability of its symptoms, by the absence of the typical myasthenic reaction, the absence of ptosis, of weakness of the jaw muscles, and of the rapid exhaustion of the muscles of phonation and deglutition, and of the dyspnœic attacks, and by the presence of muscular atrophy and the reaction of degeneration. Myasthenia gravis has been confounded with hysteria, but only by those who have been ignorant of the specific characters of the disease. These specific characters also afford a ready means of diagnosis from chronic bulbar palsy of organic origin.

Pathology.—In considering the pathology of this disease we are brought face to face with some of the most interesting problems of neuro-muscular physiology and pathology.

We have to note a more or less permanent paresis of certain muscles (particularly, as Professor Raymond of Paris has remarked, of certain muscles which are habitually tonically contracted) as well as condition of fatigue, too readily induced, in other groups of muscles. We have also to bear in mind that the muscular paresis is variable from time to time, and that the exhaustion of the voluntary muscles is more easily induced at some times than at others. The striking feature to be noted in this disease is the so-called myasthenic reaction, which was first described by Benedikt in 1868, and subsequently described by Jolly as follows: "If to the motor nerve of a voluntary muscle a Faradic current of constant intensity be alternately applied and discontinued for a small but adequate number of times, each period of tetanisation and of rest lasting a few seconds, the tetanus so produced in the muscle will gradually diminish in force and extent, until finally only at the instant of each re-application of the current a brief contraction occurs—similar to that produced by the closure of a constant current—while during the passage of the current the muscle remains in a state of very feeble contraction, or perhaps exhibits no contraction at all. If the intensity of the current be now increased, or if, after a pause of thirty seconds or more, the original strength of current be re-applied, a repetition of these phenomena will be obtained, namely, a tetanus at first persisting throughout the application of the stimulus, followed by others of gradually diminishing intensity, and finally ending in exhaustion. Also if the Faradic current be applied without intermission during a period varying from 25 to 60 seconds, a similar diminution in contractile power will be observed, which sooner or later, according to the strength of the stimulus and the stage of the disease, gives place to a condition of complete relaxation."

As to the morbid anatomy of the disease, we may say that so far no definite macro- or microscopic changes have been found in either the central or peripheral nervous system, and consequently in discussing its pathology we are obliged to fall back on analogy and our knowledge of other apparently allied diseases.

The opinion which finds most favour at present amongst neurologists and pathologists is that the disease is of toxic origin; that the toxin is autogenetic in origin, and has a specific action upon the motor nerve endings, producing an impairment in their functional activity, and so interfering with the conduct of electric or voluntary stimuli to the muscles. Physiological experiments seem to have established the fact that the motor nerve endings in muscles are the most delicate portions of the neuro-muscular neurones. Bramwell and Campbell, in their paper on 60 cases of this disease, refer to an observation made on one of their cases, which seems to support the idea that the motor nerve endings in the muscles are the sites of action of the toxin. After inducing exhaustion of the arm muscles by Faradic stimulation and then by voluntary contraction against resistance, they applied a constant current to the muscles, and a normal contraction ensued. The fact that a nerve is practically inexhaustible, and that in this case the muscle contracted to a galvanic current in a normal manner, would seem to show that the motor nerve endings in the muscles were affected. The interesting point, however, is that no recognisable changes have been detected in either nerve or muscle or nerve endings; of course the latter would be extremely difficult to determine. Although the presence of a toxin has been hypothecated to explain the symptoms, so far no toxin has been discovered; and in two cases in which the urine was most carefully examined from this point of view, nothing was discovered to bear out this hypothesis. Myers, in a thesis on this disease, has drawn attention to the fact that in some of the recorded cases a mediastinal growth was present which possibly involved the thymus gland; and he refers to the work of Abelous and Billard, who found that after the removal of the thymus in frogs fatal signs of an auto-intoxication set in. These signs consisted in a weak resistance to fatigue (the fatigue curve being shorter, and tetanus being less easily sustained), muscular feebleness, and finally progressive paresis. Tarulli and Lo Monaco also found a perceptible diminution in the force of the muscular contractions after extirpation of the thymus in dogs. Myers considers these observations as suggestive, and presumably is inclined to think that possibly either a failure of an internal thymic secretion, or the formation of a toxin in a new growth involving the thymus gland, is responsible in some cases for the symptoms of myasthenia gravis.

There are two diseases which one thinks of as possibly throwing some light on this morbid condition. One of the most prominent symptoms of Addison's disease is a condition of profound myasthenia. But this is apparently a condition affecting the whole muscular system, and is not selective in its incidence; and so far as I am able to gather no observations have been made or recorded as to the presence or absence of the myasthenic reaction in Addison's disease. The myasthenia in this disease may be due to a poisoning of the muscles by waste metabolic products, which are imperfectly removed in consequence of the feeble circulation and low blood pressure; or to the poisoning of the muscles by some specific toxin; or to the absence of that internal secretion of the adrenals which may be necessary for the maintenance of full vital activity of the muscles as well as of the other organs of the body. Whatever be the true explanation, it is interesting to note that we do find a myasthenia occurring in a symptom-complex, which is known to depend upon a morbid condition of a ductless gland.

The other disease I refer to is diphtheritic paralysis. This we know is produced by the action of a specific toxin developed as a result of microbic growth, and which exerts a selective action first on the bulbar muscles, and later affects the muscles of the trunk and limbs. This is characterised by definite microscopic appearances of degeneration of the nerve fibres and some changes in the nerve cells. Although, generally speaking, if a case of diphtheritic palsy is going to recover, complete recovery ensues in the course of a few months at the outside, two cases have been recently recorded by Wilfred Harris, in one of which the symptoms persisted for six years and then complete recovery ensued; and in another, in which the symptoms were more severe and accompanied by muscular atrophy, no improvement had occurred at the end of four years, although appropriate treatment had been adopted. These two cases are of extreme interest as showing that a paralysis which is undoubtedly toxic in origin can exist for several years, and then complete recovery ensue. Hence the long duration, merely, of some cases of myasthenia gravis cannot be considered of itself as any argument against the theory of its toxic origin. Further, the variability in the degree of the paresis in myasthenia gravis cannot be urged against the toxic theory. Sir W. Gowers has pointed out that the variations in the degree of the severity of the symptoms of tabes (a degenerative disease which is almost certainly due to the action of some toxin, whether para-syphilitic or not) are probably due to variations in the amount or toxicity of the toxin produced from time to time in the system. Sir W. Gowers does not, however, consider that there are any sufficient grounds for considering this disease as one of toxin origin; and Professor Raymond, of Paris considers that the phenomena presented in this disease may be reasonably explained on the hypothesis of a local ischæmia, due to intermittent vascular spasm affecting specially the blood vessels of the motor nuclei of the bulb, and the anterior horn cells of the superior cervical segments of the cord. He admits that no explanation can be offered for the occurrence of such spasms.

It would appear, therefore, that the theory of the disease being due to an autogenetic toxin exerting a specific selective action upon certain muscles is one which is consistent with the facts of the disease and with our knowledge to toxic processes in the nervous system. But we must admit that definite proof of the existence of a toxin is wanting, and we cannot hide the fact that there are undoubtedly certain features in the disease which are difficult to explain satisfactorily on the toxic theory.

(Read before the New South Wales Branch of the British Medical Association).

CAUTERISATION OF THE NASAL MUCOSA AND THE PAROXYSMAL NEUROSES.

By Francis Hare, M.D., Consulting Physician, Brisbane General Hospital; Visiting Physician, Diamantina Hospital for Chronic Diseases, Brisbane.

To Dr. Alexander Francis, late of Brisbane, we are indebted for, what seems to me, the most important of the advances which have been made in the practical therapeutics of asthma.[1] The technique of his therapeutic procedure is thus described by the author:—"After painting one side of the septum nasi with a few drops of solution of cocaine and resorcin on a pledget of cotton wool attached to a probe, I draw a line with a galvano-cautery point from a spot opposite to the middle turbinated body, forwards and slightly downwards, for a distance of rather less than half an inch. In about one week's time I repeat the operation, on the other side, and afterwards do it on alternate sides at intervals of ten days or a fortnight, as occasion requires. On each occasion I select a fresh spot to cauterise."

The results of this practice, including cases treated by Dr. W. N. Robertson, of Brisbane, are as follows:—

Complete relief	313 cases.
Great improvement	143 cases.
Slight or temporary improvement	40 cases.
No improvement	24 cases.
Total treated	520 cases.

The results are sufficiently startling. Undoubtedly the first sentiment they tend to arouse is one of scepticism. Nevertheless those members of the profession who are personally acquainted with the author, more especially those who have lived and worked in the same city and who have seen and followed up many of his cases, will not, I think, hesitate to accept his general results. For myself I do so with but little reserve. So well assured am I of the efficacy of the treatment that I advise all asthmatics whose complaint does not at once yield to a moderate dietetic restriction, with moderate physical exercise, to submit to it without further delay.

The full rationale of the result is obscure. The author soon found himself forced to abandon the view that the cautery destroys a sensory irritation in the nose, which is the starting point of the reflex action, "because among other abundant and convincing evidence, as a rule the quickest and most satisfactory results were obtained in cases where the nose was apparently normal."[2] He considers that "asthma depends absolutely upon an unstable condition of the respiratory centre"[3]; "that some part of the nasal mucous membrane has a controlling influence upon the respiratory centre, and that the area is situated on the septum nasi"[4]; and that cauterisation of this area is capable of restoring the stability of the respiratory centre.

These views are an almost necessary result of the author's preconviction that the mechanism of the asthmatic dyspnœa consists in constriction of the bronchioles by means of contraction of their own circular muscular fibres. But those who accept the view that the asthmatic dyspnœa depends upon swelling of the mucosa of the bronchioles through vaso-dilation of the bronchial arteries will believe that cauterisation of the septum nasi, if it increases the stability of any cerebral centre, increases the stability of the vaso-motor centre. For myself, I prefer for the present a less specific supposition, namely, that cauterisation of the septum nasi has a restraining influence upon the pathological vaso-motor action which constitutes the mechanism of the asthmatic paroxysm.

Taken in connection with Dr. Francis' discovery, the mechanism of the paroxysmal neuroses may be of extreme *practical* importance. If the dyspnœa of asthma depend upon muscular constriction of the bronchioles, then cauterisation of the septum nasi, whether it acts by increasing the stability of the respiratory centre or otherwise, will in all probability be restricted in its beneficial operation to asthma alone. But if, on the other hand, asthma is a vaso-motor neurosis, and, as I have argued in my recent series of papers on the mechanism of the paroxysmal neuroses, constitutes but one member of a long series of vaso-motor neuroses, all more or less closely allied to each other in their mechanism, then there seems no *a priori* reason why cauterisation of the septum nasi should not be widely extended as a therapeutic measure.

Even now there are more than indications that cauterisation of the nasal mucosa exerts a restraining influence upon exaggerated or disordered vaso-motor action of many varieties over and above the variety which constitutes the mechanism of the asthmatic paroxysm. In the series of papers referred to, I have argued that the phenomena of migraine, angina pectoris, epilepsy and many other paroxysmal affections depend upon exaggerations of physiological vaso-motor variations with or without the co-operation of compensatory cardiac changes; and that the physiological process of menstruation itself depends upon a special variation of vaso-motor action, namely, an increase of peripheral vaso-constriction or physiological tone, combined with, and to a large extent compensated by, pelvic, especially uterine, vaso-dilation. Now in none of these cases is there any question as to the instability or stability of the respiratory centre, and yet it can, I think, be shown, if not now, then very shortly, that local treatment applied to the nasal mucosa, by preference perhaps to that which covers the septum and by the galvano-cautery, is capable of exerting a conspicuous influence in several of these conditions.

Dysmenorrhœa.—The factors in dysmenorrhœa are numerous and diverse, but there is one factor common to all cases because essential to menstruation, namely, vascular distension or increase of localised blood-pressure in the pelvic organs. The internal organs of generation may be macroscopically healthy, there may be diseased and tender adnexa, or there may be stenosis or flexion of the cervix, causing painful contractions of the uterus upon its sanguineous contents. In any case, reduction of the vascular distension, and therefore of the rate of the blood-flow, will by so much reduce for the time being the pain experienced. The vascular distension being the result of the special menstrual variation of vaso-motor action, may be reduced by modifying the vaso-motor action; for example, it may be reduced directly by reduction of the pelvic vaso-dilation or indirectly by reduction of the widespread vaso-constriction.

These deductions may be placed alongside the observations of Fliess—observations recently confirmed by Schiff.[5] "On either side of the nasal septum there are spots which constantly become congested, swollen and highly sensitive during menstruation. Dysmenorrhœa can often be cut short by cocainising these localities, and can be permanently relieved by the use of the thermo-cautery." Schiff reports 200 observations upon 47 subjects: "All the women suffered from severe dysmenorrhœa, due in many instances to diseased adnexa. . . . Twelve patients were permanently relieved by the use of the thermo-cautery."

Considered in connection with the influence of similar procedures in asthma, angina and epilepsy, we can, I think, only conclude that cauterisation of the septum nasi relieves pain in these cases by modifying the vaso-motor action which is essential to both eumenorrhœa and dysmenorrhœa.

Angina pectoris.—It has long been known that anginal and asthmatic seizures are prone to alternate. Further, it is by no means infrequent for seizures to occur which present some of the features of both affections. For example, many asthmatic paroxysms are preceded, accompanied, or followed by severe retrosternal or precordial pain, which pain has been observed to shoot down the arm in some cases.

Such alternations or mutual replacements and hybrid seizures are readily explicable by variations in the localisation of vaso-dilation. On this view cauterisation of the septum nasi should relieve the cardiac pain as well as the bronchial dyspnœa. Dr. W. N. Robertson is investigating this point. He reports the following cases :—

Mr. M——, *æt.* 30, suffered from asthma complicated by great pain over the cardiac region. Cauterisation of the septum nasi gave prompt relief from the asthma, and the cardiac pain left him before he rose from the operating chair.

Mr. W——, *æt.* 32, had suffered from asthma in infancy. Five years ago the asthma returned and was speedily relieved by intranasal cauterisation (1902). Two years later (1904) the asthma returned, but precordial pain now accompanied the paroxysms. Both the asthma and the precordial pain were relieved at once by the same local treatment. Four months later there had been no recurrence of either symptom.

Mr. P. R——, *æt.* 63, had suffered for six weeks from regular attacks of angina every morning between 4 and 4.30. He also suffered at other times on exertion. The attacks were mild but characteristic, and yielded readily to nitrites. Cauterisation of the septum nasi gave prompt relief. After the first cauterisation he hurried to catch a train and felt "as though the attack were coming on." To his surprise, however, it failed to appear. The same occurred on several occasions, but one month later he had had no attack. A month later still he had had a few "little twinges of pain," but "nothing like the old attacks."

Mrs. M——, *æt.* 30, had suffered on and off for three years from attacks, during which she felt "as if a hatpin were being stuck into her heart," and her "heart was being crushed." The attacks left a "soreness" in the cardiac region lasting two or three days. Three cauterisations of the septum nasi gave great relief. Three months later she had had only one "dart of pain," and she expressed herself as feeling better than at any time during the last three years.

Mr. H——, after an attack of influenza, had several vertiginous attacks associated with, and doubtless depending on, bradycardia. These attacks ceased, and in their place he suffered from several slight (and severe, but short-lived) anginal paroxysms. On one occasion while seated in the operating chair, he was suffering from a little cardiac pain and uneasiness. These symptoms ceased on the preliminary application of the cocaine to the septum nasi. Immediately, however, on the application of the cautery, though this caused no pain locally, he had a violent but momentary attack.

These cases are mostly incomplete. They seem sufficient, however, to show that local treatment of the septum nasi is capable of exerting a marked and rapid influence upon the pathological vaso-motor action which constitutes the mechanism of some anginal seizures.

Epilepsy.—The occasional replacement of asthma by epilepsy, and conversely, was noted by Hyde Salter. This occurrence receives a simple explanation on the view that in both affections there is a widespread vaso-constriction; and that such vaso-constriction is compensated, in the former by bronchial vaso-dilation, in the latter by vagus inhibition of the heartbeat. It would not be surprising, therefore, for cauterisation of the septum nasi to exert a favourable influence on some cases of epilepsy. The following case in point is described by Dr. Alexander Francis[6]:

> "No. 399 (March 15th, 1902) seemed a neurotic wreck. He had asthma for 17 years, which had become so severe that he was now unable to lie down or do any kind of work. He also suffered from epilepsy, and the fits were gradually becoming more frequent and severe. The only time he had any freedom from asthma was immediately after an epileptic fit. The more severe the manifestation of the epilepsy, the greater freedom did he experience from asthma. He derived almost immediate relief from his asthmatic symptoms after his septal mucous membrane was cauterised, and without any medicinal treatment his epileptic seizures quickly became less severe and frequent. In January, 1902, he reported that he had had no further trouble with asthma, and *his epileptic fits had completely ceased*."

The following case in point is reported by Dr. W. N. Robertson :—

> Mr. F. C——, *æt.* 31, had suffered for 17 years from asthma. He also suffered from epilepsy. When he had asthma, he had no epilepsy; when epilepsy, no asthma. Cauterisation of the septum nasi (March, 1902) gave prompt relief from the asthma, with at first aggravation of the epilepsy. Then there followed relief from both affections. In June, 1903, he remained very well, but had a slight recurrence of epilepsy, for which his septum nasi was again cauterised. His subsequent history is unknown.

Migraine.—I have as yet no clinical data which go to show that cauterisation of the nasal septum exerts a restraining influence upon the special variety of pathological vasomotor action which constitutes the migraine paroxysm. I may, however, recall a paper by Dr. Alexander Francis, read before the Queensland Branch of the British Medical Association on July 13th, 1900. Herein are described nine cases of migraine or recurrent headache. In eight of these the middle turbinateds on one or both sides were enlarged and exerting marked pressure upon the septum nasi; and in all relief of the pressure was followed by marked relief from the recurring headaches. It is perhaps significant that such pressure is necessarily exerted upon the exact area, the cauterisation of which gives such conspicuous relief from asthmatic paroxysms.

Dr. W. N. Robertson reports a case of frequently recurring headache, in which painting the middle turbinateds with cocaine never fails to give great temporary relief from pain. He is quite willing to admit that this result may be due to the influence of the drug upon the septum, which could hardly escape.

In conclusion, I submit that the clinical evidence here adduced, fragmentary though it be, is sufficient to suggest that local treatment applied to the septum nasi is often capable of exerting a marked influence (for the most part salutary) upon some of the best known manifestations of pathological, and one of physiological (menstruation), vaso-motor action.

REFERENCES.—(1) Asthma in Relation to the Nose. Alexander Francis. 1903. Published by Adlard & Son, London. (2) Asthma in Relation to the Nose. Alexander Francis. 1903, p. 29. (3) *Ibid.*, p. 25. (4) *Ibid.*, p. 29. (5) American Year-Book of Medicine and Surgery. Surgery. 1903, p. 423. (6) Asthma in Relation to the Nose. 1903.

SOME INTERESTING SURGICAL CASES.

By H. L. Maitland, M.B., Ch.M., Hon. Surgeon, Sydney Hospital, Sydney.

1. *A Rare Form of Tumour of the Small Intestine. Excision with End to End Anastomosis.*

T. W., aged 48, labourer, consulted me, and gave the following history:—He had gradually been losing weight for the last 12 months; had a feeling of fulness, with some epigastric pain after food; had become weak and unable to work; had suffered from constipation the last six months; lately this had become more marked; no vomiting, hæmatemesis, or malæna. On examination, an abdominal tumour about the size of an orange could be felt; this was freely movable all over the abdomen. I sent him into Sydney Hospital.

On opening the abdomen the growth was found to involve the jejunum, nearly obliterating the lumen. A second growth quite distinct from the first was found about six inches nearer the stomach. Both growths, with the healthy intervening bowel, were excised, and an end to end anastomosis made, with the aid of O'Hara's forceps. The patient made a rapid recovery, and remained well seven months after operation. This was the first occasion on which I had used O'Hara's forceps, and then only because the Murphy's button I intended to use was faulty. A mattress suture of fine silk through serous and muscular coats, with a superimposed continuous serous suture, was the method employed. An important factor in using O'Hara's forceps is to introduce the sutures first, and tie them afterwards, otherwise too large a diaphragm will be left. The danger of sepsis is much reduced in this method of making an anastomosis. The diaphragm which is left is urged as an objection to the use of the forceps. The inventor of the instrument says the diaphragm atrophies within a week, and I am inclined to think that it does, especially if the blades are tightly closed, and the cut edges of gut are crushed.

Pathological Report by Dr. Jamieson.—From the appearance of the portion of gut removed, it is obviously high up in the jejunum. I do not remember to have ever seen a growth of similar nature from this part of the intestinal tract.

Naked-eye appearances.—The characters of both tumours are practically identical, so that one description will do for both. In extent each cross about two-thirds of the circumference of the gut, extending over the long axis for a distance of about 2½-inches; the surface of the growth is irregularly nodose and in places slightly picked out by zones covered with sloughy material, which is somewhat bile-stained. In appearance the surface of the growth resembles that of the maternal surface of the placenta, *i.e.*, it is irregularly nodose with sulci dipping in between the nodules. The growth at its margins rather overhangs its junction with the mucous membrane of the gut. In naked-eye appearances the growth to some extent resembles some growths one occasionally sees in the neighbourhood of the pyloric end of the stomach, and in the neighbourhood of the flexures of the large intestine.

Microscopic characters.—The growth consists essentially of numerous small lymphoid cells intersected in parts by chains of elementary blood channels. In places a few strands of a very delicate connective tissue are seen, but this is by no means a pronounced feature of the growth.

Opinion.—The growth histologically belongs to the class of lympho-sarcomata. Its situation, however, is very remarkable, and I cannot find any record of that class of growth in the upper part of the small intestines.

2. *A congenital malformation of the gall-bladder complicated with cholelithiasis.—Removal of gall-bladder.*

J.M., a female, married, aged 45, was admitted under my care into the Sydney Hospital, with the following history:—

Nine months previous to her admission she had an attack of colic with jaundice; the attack was a severe one, confining her to her bed for four weeks; she had had several slight attacks during the previous three years. On admission there was some tenderness on pressure over the gall-bladder; no jaundice. On opening the abdomen (Kocker's incision) a large bifid gall-bladder was found somewhat adherent to stomach, transverse colon and omentum. On opening the gall-bladder a distinct diaphragm was found between the two compartments, which lay one in front of the other; they communicated with each other by an opening the size of a shilling near the gastric duct. The front compartment was then opened, and abont 100 small calculi were removed from it. The cystic and common ducts were clear. The gall-bladder was then removed, using a small portion of the wall of the gall-bladder as a flap instead of doing it in the orthodox way, as the neck of the gall-bladder was very adherent to the liver, and could not with safety be separated. The patient made a rapid recovery, and five months later has had no symptoms.

I removed this gall-bladder because the comparative danger between cholecystotomy and cholecystectomy in this case was practically *nil*, and also because the reformation of gall-stones would be prevented by the removal of the *fons et origo mali*, the gall-bladder, and this gall-bladder from its malformation especially predisposed to their formation.

3. *A case of severe and prolonged mononephros hæmorrhage; nephrectomy.*

Mrs. X. was brought to me by Dr. Corlette. For a year the patient had suffered from hæmaturia; the attack came on while she was in perfect health and without any assignable cause. There was no frequency of micturition or difficulty in the act. There was some intermission in the presence of the blood for the first three weeks; but during the last eleven months blood in the urine had been constant in more or less quantity. A careful examination of the urine was made on several occasions; there were no tube casts, and the only abnormal constituents were blood corpuscles and the presence of a slight quantity of albumen, due to the presence of the blood. The patient had a constant left renal ache, and the clinical picture presented was exactly that of a villous growth of the bladder obstructing the orifice of the left ureter. The amount of hæmorrhage was not to any extent influenced by rest. A radiogram taken by Dr. Herschel Harris gave a negative result for calculus.

Physical examination revealed nothing beyond the presence of a small uterine fibroid.

Cystoscopic Examination.—Bladder perfectly healthy; orifices of both ureters clearly seen, but both inactive. The orifice of the left was normal. The orifice of the right ureter was widely patulous and the edges blood-stained. No efflux could be seen from either side. The diagnosis made from the cystoscopic examination was based on the condition of the meatus of the right ureter, and the inference I drew was that the blood was coming from the right kidney, that is, the side opposite to which there was pain. An examination with the segregator was made a little later on: clear normal urine was collected from the left side, which was secreted very rapidly after the lapse of about thirty minutes, and only a little deeply blood-stained fluid from the right. This made the diagnosis certain that the bleeding was from the right side, and the inference was that nearly all the body work was being done by the left side, and that little secretion was going on from the right side. The patient was reluctant to undergo any operation, and she was put to bed to see if prolonged rest had any effect on the hæmorrhage; but during the two months she remained in bed the bleeding markedly increased, clots sometimes being passed. After consultation with Dr. Sydney Jones, senior, and Dr. Corlette, operation was consented to. The patient was now extremely anæmic and depressed. Under ether administration by Dr. Gill, I removed the right kidney and portion of the ureter. This was done rapidly, simply clamping the pedicle without tying it. Before removing the kidney I had incised it and explored the pelvis, expecting to find a papilloma. The kidney was somewhat loose. The facts that the patient was unable to bear the loss of blood from the nephrectomy wound (and it bled much more freely than is usually the case), and the possibility that there was a small villous growth hidden away in one of the calicyes, decided me to do a nephrectomy, and I am sure that it was fortunate for the patient I did so. An uninterrupted recovery was made, clear urine being passed the morning following the operation, the first time for a year and eleven months. There has been no sign of recurrence of symptoms.

The outstanding feature of this case is the constant severe and symptomless hæmaturia. These characteristics in renal hæmorrhages are rare. Common as renal hæmorrhage is, it is in nearly every case accompanied by other clinical signs.

The patient was in excellent health, and without any assignable cause the more or less severe hæmaturia came on and continued without intermission for nearly two years. Urine free from blood, never having been passed once during that time. Repose had no marked diminishing effect on the progress of the disease. The urine contained nothing abnormal except the red and white cells and albumen corresponding to about the amount of blood present.

In the literature these cases have been variously described as "renal hæmophilia," "angio-neurotic hæmaturia," "hæmorrhagic kidney," and "hæmorrhage from a healthy kidney." Two cases quoted by Henry Morris are familiar to most of us, in which post-mortem nothing was found abnormal in the whole urinary tract, although death was due to hæmaturia. Fenwick in a recent publication says that in these cases the hæmorrhage is due to the formation of capillary nævi or to a varicose condition of the papillary capillaries, and he figures and describes exactly the condition which I found in this case, with the exception that in my case several papillæ were surrounded by these small red areas, and they were also to be seen in several places in the renal pelvis, but close to the papillæ, although I recognised these patches as the source of the hæmorrhage. I did not regard them as angioma or capillary nævi, as that condition appearing in patches and surrounding the papillæ had not been up to the time of the operation described. I regret that I did not have more of these areas microscopically examined, but I regarded them as hæmorrhagic areas comparable to the patches one sees in purpura hæmorrhagica, and as such they have been previously described by Granville MacGowan.

The diagnosis of these cases present many difficulties, and it cannot be done without the skilled use of the cystoscope. The segregator is also of use in ascertaining the condition of the renal secretion from the other kidney. The cystoscope eliminates the bladder as the source of hæmorrhage. You may be able to see the blood issuing from one or other ureter, and you see the size and shape of one ureteral orifice as compared with the other, all clinical factors which may be necessary in the diagnosis of the difficult cases. Having localised the kidney that is bleeding, the next thing is to determine the cause.

Fenwick places symptomless renal hæmaturia into the following groups :—

1. Chronic granular nephritis.
2. Benign and malignant growth of the kidney.
3. Rare cases of embedded aseptic calculus.
4. Early cases of tubercular disease.
5. Angioma or capillary nævus of a renal papilla.

These conditions may be differentiated thus :—The hæmorrhage from a chronic granular kidney is usually not persistent, yields to treatment, is moderate in character; the urine contains casts and a variable amount of albumen, but the hæmorrhage may be severe and persistent; in one case of mine it lasted continuously for five months, the patient dying four years later of anæmia. It is usually an early symptom. The hæmorrhage from a benign or malignant growth of the kidney possesses no difficulty in diagnosis in the later stages of the disease, but it is quite otherwise when it occurs early in the development of the case, the distinguishing feature of the hæmorrhage being that it occurs in recurrent attacks with intervals of clear urine.

Symptomless renal hæmorrhage when due to either a cortical stone or tubercular kidney is very rare, and these two groups can usually be differentiated by their well-known clinical signs. But it is not easy to make a diagnosis, despite that each group has certain distinguishing clinical signs. Then the kidney should be cut down upon, and even with the kidney on the loin it may be sometimes difficult, nay impossible, to make an accurate diagnosis; and the custom I have followed in some cases of intermittent painless renal hæmaturia has been to decapsulate the kidney and then to do a nephrotomy, exploring the pelvis with the finger; this has been invariably followed by a cessation of the hæmaturia. These cases were all intermittent, and so differed from the case I have recorded. What the pathological condition was that caused the bleeding I cannot tell. I am inclined to believe that they may have been earlier stages of the condition I have described, in which one or two papillæ have been involved.

The different forms of treatment that have been adopted for this condition are :—

1. Nephrotomy.
2. Nephrectomy.
3. Papillectomy.

Nephrotomy, to be of any use, must divide, the vascular arches at the base of the pyramids of malpighi, otherwise the supply of blood to and the return from is not destroyed, and the varicosity of the papillary capillaries remains, and the bleeding continues. In this case I am recording nephrotomy would not have benefited the patient, as nearly all the papillæ were more or less involved. In Fenwick's cases one papillæ only was involved, and that in the lower pole of the organ.

Nephrectomy must be an unfailing remedy, but should be preceded by nephrotomy, unless the patient is unable to bear the extra loss of blood that follows nephrotomy. In early cases nephrotomy is the treatment, in severe and late cases of nephrectomy.

Papillectomy is difficult because it is not easy to see and reach each papilla affected. Fenwick has practised it with success.

Pathological Report by Dr. Stacy.—Kidney.—Pale, average size; weight about 4 oz. Capsule slightly adherent in places; on removal leaves here and there a rough granular patch; elsewhere over the surface there are small deep depressions. *Cortex* slightly diminished in width (?). *Medulla* appears healthy. *Pelvis* not dilated. Scattered here and there under the mucosa are a number of small petechiæ; these are most numerous around the papillæ. At that part of the pelvis where the lining membrane is reflected from one side to the other there are several fairly large hæmorrhages showing through the mucosa as bluish-black discolourations, each roughly the size of a threepenny piece; they lie in the fatty tissue, and are about one-twelfth of an inch in thickness. The mucosa over all the hæmorrhages is intact.

Microscopically, the kidney substance is perfectly healthy, there being no sign of interstitial or other changes. A section of the hæmorrhages shows blood extravasated in the areolar tissue underlying the mucosa, and blood in and around the final tubules, which open on the apex of the papillæ; also some blood pigment, evidence of old extravasations. The vessel walls seem quite healthy. The specimen exactly resembles those reported by Hurry Fenwick under "painless renal hæmaturia," with the addition of the hæmorrhages at the reflection of the pelvic mucosa; the resemblance is remarkable.

(Read before the N. S. Wales Branch of the British Medical Association.)

TREATMENT OF TUBERCULOUS GLANDS BY X-RAYS.

By T. G. Beckett, L.R.C.P., etc., Hon. Electrician Alfred Hospital, Melbourne.

I wish to bring under your notice to-night, as briefly as I can, a new method of treating tuberculous glands by means of the X-rays, and when I call it a new method I do not wish to imply that it is original on my part, although at the time I first used it about two years ago, I had not then read of anyone else adopting it, neither has there been much published on this subject so far as I am aware; still you will find it briefly alluded to, as having been tried successfully, in Williams' works on Röntgen rays, also in Pusey's and Caldwell's book on the same subject, where you will find a summary of several cases, and what little there is known on the subject, which is enough to show that others have been working successfully on the same lines.

Tuberculous glands are an exceedingly common trouble, and you are all so well aware of this manifestation of tubercular infection that I will not waste time in saying much about the nature of it, although I should be very glad to hear a few remarks on its probable origin from those better acquainted with it than I am, as I wish to confine myself as far as possible to the question of its treatment.

At present, in any case sufficiently serious to require more than palliative and expectant measures, which usually make no difference, the only really effective treatment is surgical; and whilst in no way wishing to deprecate the valuable work that has been done, I wish briefly to point out its disadvantages, and the reasons why, if any other equally effective method can be adopted, it will probably be preferable. In the first place there is the natural fear of the unknown dangers of any operation however trifling, and although this surgical removal of diseased tuberculous glands is usually spoken of in that way, yet if it is done as thoroughly as required, to be effective, unless done by an experienced surgeon, anyone may be landed in unexpected difficulties and dangers that are by no means of a trifling character. In the neck where they most commonly occur these glands mainly follow the course of the principal blood vessels, especially the veins, and, in fact, are so intimately associated with them, that to remove them properly it is almost impossible sometimes to avoid severing a fairly large vessel; and as these infected glands are often found to extend to greater depths than might have been expected, there is often copious hæmorrhage, and the anatomy of the parts much obscured thereby, leading to structures being severed that were not intended to be interfered with. Besides the various vessels which have been unavoidably injured, admission of air to the large veins has occurred, and important nerves, such as the pneumogastric, spinal accessory, phrenic and cervical plexus, have all at various times been known to have been accidentally divided; likewise the thoracic duct and the dome of the pleura have been torn in dealing with a deep-seated and adherent mass. I do not wish to imply that these accidents are common, but the fact that they may occur are, I think, quite sufficient to indicate that to speak of these operations as trifling ones to a patient is, to put it mildly, somewhat of a misnomer. I will admit the operation often is a trifling one to an experienced surgeon, also to the inexperienced one who is modestly contented to remove one or two of the smaller superficial glands, and leave the rest prudently alone, which must be of correspondingly small benefit to the patient, and may also account for the fact that the operation often has been repeated more than once. I came across one young lady who told me she had had all her glands removed five times; how far this was correct I don't know, but the extensive display of scars on both sides of her neck was a sight one would not easily forget. This brings me to the most serious objection, viz., that excision cannot be regarded as a cure; it is merely the best expedient to be adopted in face of a confessed inability to cure. There are two reasons why the operation has to be very often repeated—first, the impossibility of drawing any certain line of demarcation between infected and non-infected glands; and secondly, that the surgeon's knife does not attack the cause, but the effect of the disease. The infected glands are not the primary cause, but the result of infection that has been incurred elsewhere, so that even if the whole of the infected glands are removed it is quite possible for others to follow on the same course. The same thing can be seen after the removal of the tonsils by excision, as you know it is no uncommon experience to find after the tonsils have been removed that in a few months the enlargement is as great as ever. The question of disfiguring scars is no trivial one to any young woman, as many of these patients are. On the other hand, by the X-ray treatment, if carefully done, there is no disfigurement (although I admit that if care is not exercised the neck may be badly marked for a time, but this usually wears off, and can generally be avoided altogether by a careful operator), and, above all, I think if you could have witnessed, as I have, the beautiful way in which in a suitable case these glands disappear, that I am not claiming too much in describing it as a process of actual cure, which can only be explained on the assumption that the rays act not only on the glands, but also on the primary source of the disease. I invariably find that the patient gains weight and improves in health. The only drawback is that some time and trouble is required; but the results are so much better, in my opinion, than by operation, that I think most persons would prefer it, and I believe that when the facts are better known the operations for excision of the glands will pass into the limbo of the discarded and needless operations.

In regard to the correct explanation of the process by which this disease is cured by X-rays, I have not time to do more than briefly allude to it; for some time to come this must be purely conjectural, and different theories may be put forward. Laboratory experiments so far are not conclusive as to the bactericidal action on tubercle bacilli; so far it inclines to the conclusion that these bacilli are not killed by the amount of X-ray exposure which could be tolerated by the tissues of the body; but it must not be overlooked that all these experiments are conducted on bacilli living in very different surroundings of nutrient media favourable to their growth, and this may very likely be a different thing to bacilli living in living tissues as hostile invaders, and which presumably would destroy them if they could do so, and the assistance to do so might be conceivably rendered by the X-rays; and although the action of the X-rays on bacilli themselves may in the light of our present limited knowledge be doubted, yet the very active effect of the X-rays on living animal cells is indisputable—an effect which is not visible at the time, but comes on and lasts for a considerable time afterwards, and this effect may bring about a condition of the surrounding tissues that is inimical to the existence of the tubercle bacilli. I think it far more likely to be due to this effect than any action of the rays on the bacilli themselves during the short time they are exposed to it. In regard to the method of treatment, as so much of this work is largely a question of time and patience, nothing can be accomplished in a few days or a few exposures. I use a powerful coil and a current of large amperage, giving five minute exposures two or three times a week. As might be expected, it is advisable to use tubes in the highest practicable state of vacuum to obtain as deep pentration as possible, and also because I think these tubes give other advantages specially suitable to these cases. In the first place such exposures are rather severe, and with ordinary low, or comparatively low, vacuum tubes the difficulty is with the dermatitis which arises and compels the treatment to be suspended for a while, and I find it possible to give longer exposure and can use stronger currents (that is, up to 8 to 10 amperes) before the dermatitis becomes troublesome by using such tubes. In some patients marked pigmentation takes place, which may last for a while after the treatment is suspended, but this is not permanent, and in time as the skin is renewed it entirely disappears. Some modification is required in individual cases as experience suggests. In cases where suppuration has already commenced, my practice is to open and drain through a small opening, keeping open as long as necessary; they heal readily and do not show any tendency to suppurate again. Treatment varies in length of time according to the severity of the case, but roughly speaking from one to three months as a rule, but I have taken longer. I also sometimes use the high frequency currents in conjunction, but I regard the X-rays as the main factor in the cure, and that is another of the reasons why I prefer a very highly exhausted tube, as a certain amount of high frequency currents are being given off all the time; if a low vacuum tube is used no good effect seems to result. The enlarged glands disappear very slowly, and even at the end of the treatment can still be detected, but the improvement continues afterwards until they entirely disappear. One marked feature is the decided improvement in the bodily health of the patient that takes place. I nearly always find that they gain weight. Enlarged tonsils, which are also often present, also subside, from which I believe this treatment would be as beneficial for such cases, and might well be tried before resorting to excision. As regards the prospects of recurrence I quite expected to find that would take place, but so far I have not seen it happen yet. I should merely regard it as an indication of insufficiently prolonged treatment.

I will now quote briefly a few typical cases in which this treatment has proved successful:—

Case 1.—This was a girl, age 15. About six months previous a large swelling took place in the neck. There is a history of tubercle in the family. She came up to Melbourne for advice, and it was diagnosed as a case of enlarged tuberculous gland, and for which excision was advised. Her parents being much adverse to an operation, I was asked if I could treat it successfully with the X-rays. I took the photograph, which I am going to show you, before I started treatment, and the one attached to it afterwards. These cases do not lend themselves to photography very well as a rule, the presence of the glands and their condition being more clearly perceptible to the touch than to the eye. In this case suppuration had already commenced, so a small opening was made and kept open for about a fortnight, when it healed, leaving the gland still about a third the size. The treatment was continued at first bi-weekly and afterwards weekly for about three months, and also at longer intervals afterwards. I saw her again a few days ago, and the condition was most satisfactory; the enlargement was completely gone, and only a slight mark was left at the site of the opening where it was lanced. Her health improved, and she has gained weight. In the photo. taken of her when cured you will notice a mark due to slight pigmentation, which photography exaggerates; this has since disappeared.

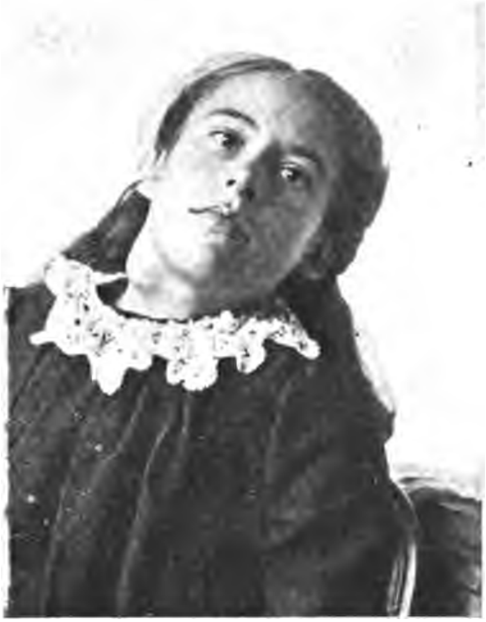


FIG 1.

BEFORE TREATMENT.

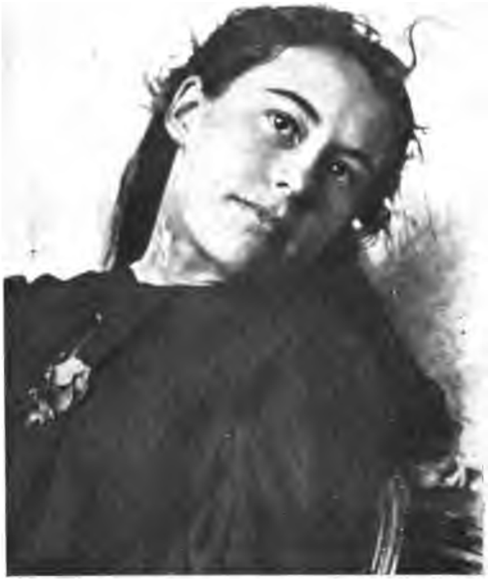


FIG 2.

AFTER TREATMENT.

Case 2.—Woman, age 19, was operated on by Dr. Stirling at the Melbourne Hospital in November, 1901, and a number of glands were removed. They started to recur in two months after the operation, and she came up to town and saw Dr. Stirling again, when he advised another operation. She came to me, and I found a diffused mass of tuberculous glands in the upper part of the right side of the neck. She was placed under X-ray treatment for three weeks, and they at once started to go down. She returned to her home, and came back to me for further treatment in a fortnight, and in another three weeks was sufficiently well to return home; the glands had then almost entirely disappeared. She called in to see me three days ago, and I was pleased to find that the large glands have now entirely disappeared, both sides being now the same size, and her neck measures three inches less in diameter than it did when I took her in hand over twelve months ago.

Case 3.—This was a girl, eight years of age, with enlarged glands that had been growing for six months. She had been advised that an operation was the only treatment that would be of any use. It was not a particularly bad case; she had her tonsils also enlarged. Five weeks X-ray treatment was sufficient, and as usual I found the tonsils also regained almost their normal size. Her general health much improved, and she gained five pounds in weight.

The above cases are fair average specimens of the class of cases which we all are well acquainted with in general practice, but I have met with tubercular glands in other parts that have yielded equally good results to this treatment. One I remember of a very large mass of tubercular glands in the axilla that did well. I am now treating an enlarged testicle that I believe is tubercular, and it is doing well. In fact, wherever you have local tuberculous disease to deal with, such as many cases of bone trouble, the X-rays will be found of great service, but as this is outside the scope of my present paper I cannot deal with this to-night.

Case 4.—I will now show you a typical bad case that has been under treatment for nearly two months, so that you can see the effect whilst under treatment. This patient has about as bad a family history as could very well be. Her father died of consumption, also two aunts, one about the same age (24) as her. Her brother, age 19, is now dying of laryngeal phthisis, and from her appearance and symptoms I fear she is doomed some day to travel the same sad road herself. Her glands on the left side of her neck started to enlarge 18 months ago. She has been under the care of several experienced doctors, who all advised an operation, including Drs. Vance and Moore, who strongly urged that an operation should be done the beginning of this year, and Dr Gaunson. who finally sent her to me at the Alfred Hospital, with a view to X-ray treatment. When I saw her in February the cervical glands were all badly involved from the top to the bottom of the sterno-mastoid, extending down deeply into the direction of the apex of the left lung, and not only that, but an X-ray examination of the lungs showed a well marked darkened area indicating tubercle, although, excepting for this screen examination I don't think she showed any of the usual preliminary symptoms of phthisis, excepting a steady loss of weight the last two years. Some of the glands were unusually large and projected very prominently. I am sorry I did not take a photo of her at the time so that you could better appreciate the striking difference now. I may mention that I also used the high frequency currents in this case, as I do sometimes in these cases, but I attribute the result mainly to the reaction caused by the X-rays. You will notice that although you can detect some of the glands they are not conspicuous, and without any further treatment I think they would in a few months disappear entirely; but owing to the serious outlook in this case I shall keep her under treatment for some time. I am glad to say that the screen now shows the dark patch in the left apex has entirely cleared up. I took all this area in, as you will see by the well-marked pigmentation of the skin, and this you might note is the limit I usually push the X-ray reaction to; if you were to go much further, violent dermatitis would suddenly come on, causing a breach of the surface and compelling the cessation of the X-rays for a while. If this young woman is alive in another five years I think it is not too much to claim that she will owe her life to this treatment, as I cannot see how any surgical operation, however thorough, and it would have been a very serious one, would be likely to prevent the onward march of tuberculous infection, which would almost inevitably continue afterwards.

(Read before the Victorian Branch of the British Medical Association.)

The Victorian Football Association is considering a suggestion that the proceeds of the opening matches of the season should, after payment of expenses, be handed to the Melbourne Hospital and the ladies' benevolent associations in the districts of the competing clubs, half to the former and half to the latter. The scheme, with possible modification of detail, appears to meet with general favour.

MODES OF INFECTION.

By **A. C. F. Halford, M.D., B.S. (Melb.), late Medical Officer to the Metropolitan Joint Board for the Prevention of Infectious Diseases, Brisbane; Assistant Honorary Physician, Brisbane Hospital, &c.**

THE word *infection* finds a place in the title of this paper because I regard it as a more suitable word than *contagion* to cover the general notion of transmission of disease from one person to another. The same word in the dictionaries is defined in so uncompromising a manner from the etiological point of view that one is at once prompted to deal with it in a paper, as I now propose to do.

One dictionary says: "Infection is frequently confused with contagion, even by medical men. The better usage now limits contagion to diseases that are transmitted by contact with diseased persons, either directly by touch, or indirectly by the use of the same articles, by breath, effluvia, etc. Infection is applied to diseases produced by no known or definable influence of one person upon another, but where common, climatic, malarious, or other widespread conditions are believed to be chiefly instrumental."

The above explanation would give the idea that infective agents possessed a real, active and invasive personality, so that those who wished to avoid them required to give every source a very wide berth, geographically speaking.

We now know, as the result of comparatively recent research of a most painstaking character, that difference expressed in yards or even miles is quite justifiable and even necessary where complete immunity from infection is desired. But this is not because the virus itself has the subtle invasive powers of a submarine, for instance, but because it is capable of inhabiting a living host, somewhat unbiquitous, with marked centrifugal tendencies; *par exempla*, the mosquito and the flea. These parasites having been proved to harbour the contagium of malaria and plague respectively, our conception of infection becomes analogous to or even identical with what we understand by the word contagion. Indeed, the act of convection of the poison is very much akin to a neatly executed experimental inoculation. This all may seem very commonplace to everyone, but it bears an important lesson all the same. We at once think that all diseases, the mode of infection in which is not at present clear to us, are spread by means which are not a whit less sure, and in details almost crude. The old conception of malaria, with its miasma and miasmatic influences, gives place to the amply proved and tangible theory of Manson and Ronald Ross. We still cherish atmospheric influences in respect to the common household cold, nevertheless. Air-borne infections having an independent existence therein have been advocated with great pertinacity from time immemorial, but the number of diseases which can now be ascribed to such (for want of more accurate knowledge) is becoming less and less every day. The common exanthemata, epidemic diseases such as enteric, dengue, pneumonia and influenza, are commonly spoken of as air-borne. Gradually but surely evidence is accumulating which goes to show that good as the case may seem that air convection plays a part, many and many a case can be traced to very distinct and even gross contagion in the literal meaning of that word.

I do not wish to be understood to mean that air-convection plays an unimportant part in the spread of disease. One cannot doubt for a moment that it is risky to converse, especially within doors, face to face with a person suffering from the latest coryza or harbouring any other virus in some part of the respiratory tract. That, in my opinion, amounts to contagion. One is a target, too often vulnerable, just as much as any culture plate or dish of milk may be, under somewhat similar circumstances; but, nevertheless, the atmosphere soon would become free from infection, but how soon depends on circumstances.

We will now consider a few concrete examples and discuss the etiology of the spread of certain diseases the mode of convection in which is generally ascribed to causes to my mind somewhat vague.

I.—SCARLATINA.

The spread of scarlatina from case to case has been the subject of much discussion and research. The greatest prominence has been given to the most obvious feature of the disease—that is but human. In comparatively recent years attention has been drawn to the very persistent but easily overlooked ear, nose and throat discharges in convalescent scarlatina patients. No one doubts, I should think, that a persistent but insignificant rhinorrhœa is very likely to be highly infective. For all practical purposes, however, the question at issue is, Are the desquamations infective ? It also occurs to one to ask: If the desquamating skin is infective, can it in the late stages be disinfected *in situ ?*

In the first place, desquamation is usually coincident with convalescence; it is a dry process, not the result of, or accompanied by, a mixed or any secondary infection; it is, therefore, not favourable to the persistence of any morbific agent, and on those grounds the virus is not likely to leave the system via the shedded skin. Paradoxical as it may be to say so, it is of little practical importance in answering the question; that is to say, that although I do not believe that the virus of scarlatina leaves the system via the dermis or any part of it, at least in an active state, yet I fully believe that the desquamated skin may spread the infection.

We must remember that we are dealing with children and infants in the majority of instances, and granted a highly infective condition of the buccal nasal, and aural discharges, if any, it is not difficult to imagine frequent and thorough contamination of the desquamating skin of the hands and of the feet, too. In point of fact, any part where a child sees an opportunity to remove with its fingers a considerable portion of cast of epidermis, that epidermis will in most instances be thoroughly charged with infection from fingers frequently found in the infected cavities of the face.

From the foregoing you may gather that if the infection persist in any of the usual cavities of the head, one can reckon on the desquamation being infective. If, soon after convalesence is established, the aforesaid cavities are in a healthy condition and do not harbour infection, I think that we can safely say that the disease will not spread by the desquamated skin. At the same time I consider it very unlikely that the infectivity of the oral passages would persist for less than four weeks.

I therefore regard it as quite possible to disinfect a remnant of cast off epidermis *in situ* by repeated or prolonged immersion in a solution of some reliable antiseptic, if one is previously satisfied that the fauces are healthy. It is not uncommon in Brisbane to find that desquamation of the soles of the feet is incomplete at the end of even eight or ten weeks, even in cases of quite moderate severity. If there have been no nasal or aural complications, the infectivity of the skin of the soles of the feet is surely a negligible quantity at the sixth week from the onset of illness.

Cultural experiments have signally failed to reveal the contagium in the cast off epidermis. At any rate the many fallacies possible in any such experiments must make us chary of accepting any results that may be returned as positive. There is no doubt that contaminated portions of epidermis would make subtle and potent agents for the distribution of the virus of scarlatina.

To sum up, while it is inevitable that every case of scarlatina should be judged on its merits as to infectivity at any given period, I fully believe that the chief source of infection in this disease rests with the discharges from the vicinity of the original site of inoculation of the virus.

II.—Enteric Fever.

As before mentioned, enteric is sometimes said to be the result of air-convection. It is most commonly ascribed to pollution of the water supply or some article of food such as milk kept in the vicinity of contaminated and defective drains.

During past years I have had exceptional opportunities of inquiring into the origin of cases of this disease in every part of Brisbane. Although I have personally investigated some hundreds of cases, I have never yet had reason to suspect either the water or the milk supply. I mean by that that no suspicion was attachable to these necessaries, as they were received from their source. In practically every instance the cases were not ascribable to any specific mode of infection. They were what is called "sporadic." In many instances the cases were grouped, sometimes three or four occurring in the same street. It was notable that in some instances cases occurred in or near houses where enteric was known to have been during the previous year. Finally, the majority of cases were met with during the summer months. These characteristics indicate endemicity, with a tendency to seasonal epidemicity. The endemic feature is the important one and demands consideration. The endemicity of enteric in Brisbane depends, in my opinion, on the known fact that the bacillus may persist and be found in the excretions, especially the urine, of persons convalescent from enteric fever for many months. Secondly, the disease may occur in a very mild or aberrant form, particularly in children, so that its true nature is not recognised. I think there is no doubt that these mild unrecognised forms of enteric are much more common than is supposed. These features of the disease would be amply sufficient to account for the endemicity of the disease. The recrudescence of the disease in summer months requires explanation. While undoubted and severe cases of enteric may be met with at any time of the year, the conditions which obtain in Brisbane in summer time are favourable to the spread of an infection which is known to be largely, in fact, almost entirely, cast off in the dejecta of sufferers.

In the first place the natural seasonal influence on organic life leads to special reproductive activity. Wherever carried, luxuriant growth into large colonies is met with. In this fact (the formation of large colonies) lies the certainty of infection being set up. The dose is an important factor in successful inoculation. During summer there is a greater consumption of foodstuffs which form favourable niduses for growth. Milk is plentiful, and therefore cheaper; cold foods, such as cold meats, cold vegetables (potatoes) and puddings, etc., are more commonly eaten in summer than in winter. There is also a larger consumption of drinks and ices, which form good culture media. Lastly, there is great activity in the insect world, wherein are to be found the distributing agents of filth of all sorts. But it is not filth of all sorts that will set up enteric fever, but filth from the dejecta of a previous case which has been deposited somewhere favourable to rapid growth and colony formation.

The insects chiefly concerned in this work are surely most commonly the ordinary house fly and the blowfly. It is not unlikely also that cockroaches and some beetles are responsible in certain instances. It is, of course, almost impossible to produce evidence of the origin of enteric in this way, but many facts can be brought to bear which lend the theory considerable support.

In investigating an outbreak at a shearers' camp in January, 1901, I was forced to the conclusion that the food supplies were infected by flies coming from a long trench used as an earth-closet by the men. The cases occurred among men who occupied a certain hut, which was also in one part of it the mess dining-room. This building was closest of all to the open cesspit and in the direction of the prevailing winds. Not a single case occurred in any other hut, the men of which had their own mess table. The water was drawn from large iron tanks at the wool and shearing sheds, which were three or four hundred yards away. Enteric fever had broken out at this same place during the previous shearing season. I do not believe that the infection had remained in the soil or vicinity all that time, but that some member of the camp had had enteric some time before arrival in camp and was casting infection around him wherever he went, through the dejecta, of course.

At my recommendation the camp for the next shearing season was erected upon another site, and the sanitary arrangements were placed to leeward. The only alteration in the mode of treating the nightsoil was that it should be carefully screened every night and morning. Since these alterations were made no outbreak of the disease has occurred.

In a report on an outbreak of enteric at the Boggo Road Gaol, I came to the conclusion that the virus came from the closet-pans and urinals, which were situated to the windward of the part of gaol which supplied the cases; that flies carried it into the cells, or infected portions of food secreted by prisoners, or picked up by them after being discarded as waste; that the urinals and closets received infected dejecta from prisoners convalescent from the disease. No sanitary defects could be discovered, nor any reason to think that food was infected before it reached the cells. Very great care is taken in the preparation and the distribution of the prisoners' food.

During the year from July 13th, 1902, to March 14th, 1903, 218 cases of enteric were reported in and around Brisbane. These cases were specially investigated by me with a view of determining their origin. As in previous years, I was still unable to find any evidence that they were water-borne or were derived from any common centre of infection. All the cases were essentially of a sporadic nature. In a few instances small localised epidemic foci were discovered.

The above period covers the greater part of the enteric season, but, nevertheless, the number of cases notified is out of all proportion with the number of all the other acute notifiable diseases put together. I think all agree that enteric is the least infectious and the most easily preventable of any of the other acute infectious diseases.

With regard to the contagiousness of enteric, it must be admitted that infection is more certainly and continuously spread from patients who are nursed under unfavourable conditions and by persons who from ignorance or want of due care do not take proper precautions, or again in those instances which are not uncommon where the real nature of the disease is not recognised, and no precautions are taken against the spread of infection. These conditions may, of course, be found in any home, but for obvious reasons are more likely to be met with in the homes of the poorer classes in which the conveniences essential to provide against the spread of infection are wanting, and where often enough for similar obvious reasons the patient is left to the care of unskilful persons. In the homes of the majority of patients, longer intervals occur between the visits of the medical attendant than is customary in hospitals, and, in fact, there can be no doubt there is an absence of proper supervision and of adequate precautions in a considerable number of those patients who are treated at home than is usual in properly equipped hospitals; that is, always providing that the services of trained nurses are not availed of. Under the care of a trained nurse who does her work properly, and there are few who do not, there is nothing left to be desired from the point of view of prevention.

In nearly all cases, however, there was evidence that contamination of the food by flies was easy and not guarded against, supposing that there was a source from which the specific germ could be derived. After consideration, I concluded that the source was either from a known existing case of enteric near by, or from an unnotified case also close at hand, or from cases of illness, enteric in character, but not severe enough to require medical aid, especially among children.

In one instance I investigated five cases of severe enteric in five separate houses, but all near to one another. Inquiry led to the discovery of the fact that in a family of six young children living near to but to the windward of all the cases except one which was next door, illness had persisted for a couple of months. First one and then another of the children would fall ill with indefinite symptoms, which kept the child more or less laid up for about two or three weeks. No doctor attended, but a sort of local quack described the cases as feverish biliousness. The discharges from the children were thrown on to a manure heap at the back of the premises. If any attempts were made to bury the dejecta, the fowls quickly exposed the material. I could not find that there was another case of illness of any sort within a mile of this spot except those which broke out like a small epidemic almost simultaneously about it. I feel sure that these children had enteric and that flies carried the fresh virus into neighbouring houses, with the result that in some of them healthy and vigorous cultures of Eberth's bacillus were swallowed with the food, and severe illness resulted. One case was fatal.

Examining our returns we find that the public are not unacquainted with the many advantages of treatment in hospital, public or private.

As above mentioned, 218 cases of enteric were notified during eight months. I am afraid that not all of the cases which occurred were notified, especially of those nursed at home. All cases treated in hospitals were notified. Of the total number (218), 48 were isolated at home. The remainder (170) were removed to hospital at various stages of illness.

During the 1st week 81 were removed to hospital.
During the 2nd week 60 were removed to hospital.
During the 3rd week 15 were removed to hospital.
During the 4th week 14 were removed to hospital.

From these figures we conclude that over 60 per cent. of the cases were removed in the first or second week of the illness. There are not many admitted to the hospital in a later stage of the disease than the end of the second week. Of the total number of cases only 29 (about 13 per cent.) were admitted in the third week or after of illness.

The segregation of cases of enteric in the early stages to the extent indicated above must have a very marked effect in limiting the spread of the disease. Of the comparatively small number nursed at home, a fair number are under proper care and supervision, because they mostly occur in the houses of the more favoured classes.

This fact considerably reduces the risk of infection spreading from cases nursed at home.

If the figures were only available it would be interesting at this stage to compare the average annual incidence of the disease in and around Brisbane before the popularity of the hospitals in the matter of treating enteric in special wards was the marked feature it is to-day, and has been for many years now, and the corresponding figures since this favourable impression of hospital treatment has been created.

It would be interesting to see if there are any advantages from the public health point of view in isolation in hospital of a larger percentage of cases than was formerly the case. I have no figures to prove this; nevertheless I firmly believe that the annual incidence of the disease per 1000 of population in the metropolitan area is less than that which was the case 15 or 20 years ago. It will be said that this is owing to improvements in sanitary conditions in the metropolis. That may have some influence, but the more or less regular segregation of cases would have more influence in checking the disease than all the sanitary provisions in the world.

In late years it has been shown that in enteric there exists a real danger to health in excretions of patients (chiefly urine) who have convalesced from the disease, and that for many months or even years such persons may act as a centre of infection. This is a difficult subject to deal with on account of the variability of time during which enteric germs may be passed from the system after recovery. Nevertheless the matter is too important to be neglected, and no doubt the risk of spread of the disease from such sources may be greatly minimised by carefully instructing convalescent patients of the risks involved, so that they may take proper precautions.

With regard to cases nursed at home, the discharges may or may not be dangerous according to the manner in which they have been disposed of. The usual practice, after adding some disinfectant or not, is to bury the excreta on the premises or deposit them in the pan of the earth-closet. A special pan is usually supplied after the case is notified. Disinfection at any stage of these proceedings, I am certain, can never be thorough. What has been buried is sometimes exposed by fowls scratching, or by some accidental means, while that which is placed in the closet-pan is often not sufficiently covered. It is then that flies may come in and carry with them virulent poison back into the house or into neighbouring houses, and contaminate the food supply. The larvæ of all sorts of flies and many winged insects are hatched in the closet-pan; if the latter is not frequently removed, cockroaches may come from these situations to the larder and bring infection with them.

The practice of burying excreta from fever patients on the premises is not desirable. It is better to have such material removed far away from habitations, which can be done by placing them in the closet-pan. Though it is impossible to disinfect thoroughly, it is possible to cover the deposit well with deodorant, which is all that is necessary to prevent the infection being carried back into the same or other houses.

This brings us to the crux of the whole question, at least practically so. A great deal of work is continually going on to discover under what conditions germs of disease, enteric and other, can exist outside the human body. It is a very important study certainly, and profitable results will follow the completion of the labours; but it is very like the measures that are adopted to recover a horse which has escaped through an unlatched stable door. In spite of the unrecognised cases of disease and other of unavoidable contingencies, the greatest measures of success in checking the spread of disease will follow the practice of destroying the infecting agent immediately it is cast off from the body. Our first efforts must be made at the bedside. If our only preventive measures were adequate and efficiently carried out at the bedside in every case of enteric fever (say) and in every instance of suspected enteric fever, such a thing as endemic enteric fever would be almost unknown, and epidemic outbreaks would be limited to very special and accidental conditions.

It is a good rule, which I always endeavour to insist on, that all discharges from any source in cases of sickness, especially if accompanied by rise of temperature or other signs of "feverishness," should be destroyed by fire or otherwise satisfactorily disposed of. If that were regularly and intelligently done, disease would have little chance of spreading.

Just for a moment let us refer to the oft repeated statements concerning the influence of insanitary states of a town on the incidence of enteric upon its inhabitants.

In the series of cases referred to above an arbitrary estimate was made of the number of houses which could be said to have their sanitary surroundings in a satisfactory condition, and those who could not be so classed. I do not for a moment regard the figures as of much importance, but it will be noted that the proportions are not quite as one is taught to believe they should be. In 88 houses where enteric occurred the sanitary conditions were regarded as satisfactory. In 130 cases where enteric occurred the sanitary conditions were regarded as unsatisfactory. This proportion is just about what one would find in any series of tenements taken at random, independent of the existence of disease.

The general conclusion is that ordinary sanitary measures do not have much influence in diminishing the incidence of diseases of this class. It is well known, however, that the institution of a sound system of drainage by water carriage has a very marked influence in lowering the enteric rate. The explanation of that seems to me to be simple. Water-closets and lavatory conveniences which accompany such systems of drainage greatly facilitate the removal and disposal of dejecta from sick persons. The great point is that flies cannot get access to virulent enteric stools or urine, and the spread of the disease is at once checked. Enteric in seweraged towns may occur in alarming epidemic proportions. That is always the result of sewage pollution of water or milk supplies. Such causes are usually easily traced, although hard to prove bacteriologically. Seweraged towns, therefore, are largely protected against sporadic enteric, but such systems bring with them big risks of widespread pollution, of water for instance, which have to be carefully guarded against, or serious epidemics may arise.

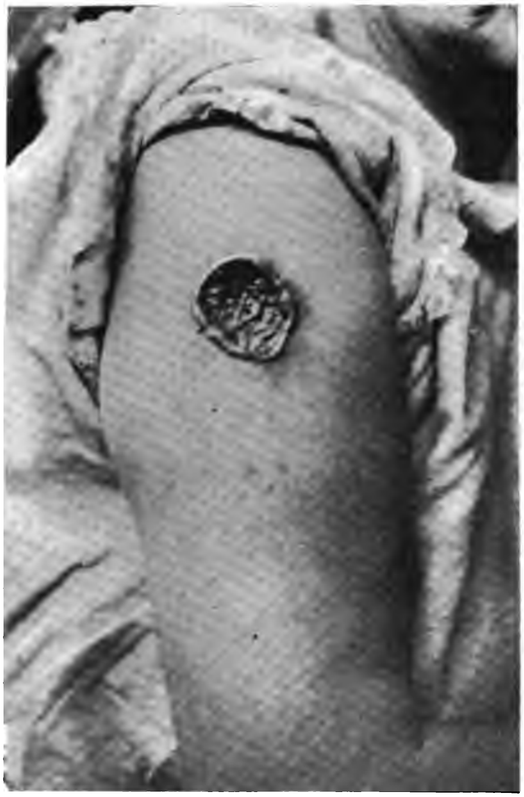
(**Read before the Queensland Branch of the British Medical Association.**)

Lord and Lady Northcote last month paid a visit to the Austin Hospital at Heidelberg, Victoria, and went over the whole of the buildings. Their Excellencies spoke a few words to each of the inmates of the institution, who were all delighted at the honour paid to them. During the afternoon a handsome testimonial was presented to the matron, Miss Mona Kerr, who is severing her connection with the hospital after six years' service.

RODENT ULCER OCCURRING IN AN UNUSUAL SITUATION.

By W. McMurray, M.D., Physician to Department for Diseases of the Skin, Sydney Hospital.

Mrs. L., aged 62, a healthy-looking woman, consulted me on the 29th May, 1903, complaining of a slightly painful ulcer on the outer side of her right arm.



She states that she always enjoyed good health. Has had 12 pregnancies — eight children born alive, four miscarriages. Family history good.

The lesion commenced nine years ago as a "spongy blood wart" with a flat top, brownish-red in colour; firm to touch, the surface of which became abraded and a scab formed. This gradually broke down, discharging a thin watery fluid. It slowly extended at the margins until it attained its present size.

The ulcer is the size of a five-shilling piece. The edges hard, indurated, elevated, rounded or "rolled over." The surface dry, without granulations. The floor is deep and unequally excavated. The immediately adjacent skin appears healthy. When grasped between the fingers the base and edges feel hard. The glands in axilla are not enlarged.

The photograph gives a good representation of the condition.

The treatment adopted was excision.

It is well known that the upper part of the face is the usual situation for this ulcer. Cases are occasionally reported occurring elsewhere. Crocker in his text-book, page 946, states:

"Although it is true the vast majority of cases (seven-eighths, Bowlby) are situated on the upper two-thirds of the face, a few occur in the lower part of the face, and in rare cases it occurs quite away from the head and neck. I have seen it affecting the ears, nape, and just above the sternum. Bowlby also records it on the back; J. Hutchinson, jun., on the forearm and groin; and I have had a groin case which developed from a hair follicle; Pigg, one in each groin; Rolleston, near the umbilicus; B. Robinson, on a male breast; and C. Fox, on the sternum."

A FEW NOTES ON "FAT NECROSIS" OF THE PANCREAS.

By E. A. Johnson, M.D., M.R.C.S., Assistant Physician to the Adelaide Hospital.

THIS condition was first described and designated by Balser in 1882. My advent in the Göttingen post-mortem room was heralded by a case of fat necrosis of the pancreas. The body was that of an elderly woman, somewhat emaciated and jaundiced. She had suffered, during life, for years with chronic cholelithiasis. On opening the body the gall-bladder contained four large faceted calculi. The ampulla of Vater's papilla (where Wirsing's duct opens in common with the common bile duct into the duodenum) was blocked by a gallstone the size of a small pea. On the surface of the pancreas and the great omentum were a number of white spots, the size of a pin's head, somewhat resembling tallow spots. Under the microscope these areas were shown to be those of necrosis, from their failure to stain; whilst in freshly teased specimens a few fat crystals were noticed. Professor Orth remarked that such cases were comparatively common if only looked for.

Since that date I have comparatively frequently seen cases of fat necrosis in the post-mortem room. One has but to carefully and systematically search each organ at a P.M. in order to become acquainted with the fact of certain lesions frequently occurring, which are usually overlooked, and not be content with abandoning further research so soon as an obvious cause of death is found, *e.g.*, in jaundice cases, one finds a few gallstones in the gall-bladder, and that is usually sufficient for the G.P., so he does not proceed to lay open the ductus choledochus, or examine Vater's papilla in the duodenum for a calculus, far less does he think of examining the pancreas for necrotic areas.

Since my attention was first directed to this disease in Germany, I have been on the "look out" for similar cases, and I have seen a good number, as they occur fairly frequently, especially in cases of gallstones and hæmorrhagic pancreatitis. One notices in the fat in the neighbourhood of the pancreas, small, slightly raised, white, opaque patches, usually circular in shape, in fact very much like soap in appearance; occasionally they are surrounded by a thin hæmorrhagic zone.

These foci are seen in the fat on the pancreas in the substance of that gland, as well as in the fat of any part of the abdomen; also, on the abdominal wall. The great omentum is the favourite site. They have also been recorded in the fat beneath the pericardium and the pleura, as well as in the subcutaneous tissue (chiari).

In acute hæmorrhagic pancreatitis, fat necrosis is almost invariably present, and seems to be part and parcel of this complaint.

Langerhans, the pioneer of pancreatic research, has definitely shown that these changes within the fat cells are due to the spitting up of fat into glycerine and its fatty acids, and that this is dependent on some lesion in the pancreas. Flexner demonstrated, first, this fat-splitting ferment, which is known as steapsin. Human fat is rich in stearic, palmitic, and oleic acids. Now, the action of superheated steam on stearin is to form stearic acid whilst glycerine is liberated.

$$\underset{\text{stearin}}{C_3H_5(C_{18}H_{35}O_2)_3}+3H_2O=\underset{\text{stearic acid}}{3C_{18}H_{35}OOH}+\underset{\text{glycerine}}{C_3H_5(OH)_3}$$

The glycerine being soluble is soon absorbed, and small needle-shaped crystals of the fatty acids are deposited within the fat cell. The calcium salts in the body soon neutralise this acid, and an insoluble, irregular-shaped calcium salt replaces it, thus forming a saponification rather than a necrosis. If this is examined microscopically, one sees only granular detritus.

Irritation is induced in the neighbouring healthy cells, a hyperplasia of the connective tissue resulting. In this peripheral zone are deposited a few polynuclear leucocytes, several giant cells, many lymphoid cells, as well as larger round, or oval-shaped cells with a vesicular nucleus, containing numbers of very small fat globules; these are probably fat cells in process of multiplication. With osmic acid the necrotic areas remain unchanged, whilst the adjacent healthy fat is stained black.

Up till now, no bacillus has been isolated, which, on injection into a healthy animal, will reproduce this disease. Welch found the colon bacillus present in two cases, but, as marked lesions of the colon were found in both cases, this would be sufficient to account for its presence.

On searching through the German literature, I was able to find that a good deal of attention has been given to this subject.

I will here summarise the results of the experiments, without wasting space through giving them in detail. The principal experimenters were — Hildebrand, Dettmer and Flexner.

1. Injecting steapsin (the fat splitting ferment) into animals has caused it.
2. By merely making a few transverse cuts into the substance of the pancreas, and allowing the pancreatic juice to escape into the abdomen has produced it.
3. By ligating the pancreas, and in that part of the gland distal to the ligature, necrosis occurs.
4. Simply tying the veins of the ligated part, thus preventing absorption of the obstructed pancreatic secretion, a hæmorrhagic pancreatitis is produced, causing a well marked necrosis in this area. Hence a calculus blocking the duct, thereby causing a stagnation and hæmorrhagic infiltration of the organ, no doubt explains its occurrence in gallstone cases, or when a pancreatic calculus blocks the duct of Wirsung. In cases of marked cancer of the head of the pancreas, small necrotic foci have been noticed.

Balser and Olt have noticed marked widespread spontaneous fat necrosis in several of the domestic animals, especially in pigs.

Accepting the above experiments as granted, how are we to explain the widespread dissemination fat necrosis, *e.g.*, in the subcutaneous tissues? Here we cannot account for it as being a contact necrosis, as Langerhans explains that in the abdomen. What is the factor at work?

Is the fat-splitting ferment carried by the lymphatics? No doubt further elucidation from experiments will determine this point.

Slight fat necrosis has been observed without any pancreatic lesion being detected. This, then, opens up another field for speculation. Langerhans said the post-mortem action of the gastric juice would be sufficient to account for it.

In closing, I hope I will be pardoned for my digression, in referring to the case of Bayliss v. Coleridge, which is described at length in the last two *British Medical Gazettes.* It was in reference to original experiments on the pancreas performed during life in animals under an anæsthetic.

I am certain the profession unite in congratulating Dr. Bayliss on winning his case, for without such experiments how could medicine have made any progress and suffering humanity thereby benefited?

A CASE OF OSTEITIS DEFORMANS.

By Mark C. Lidwill, M.B. & B.S. (Melb.), Senior Resident Surgeon, Ballarat Hospital.

I WISH to bring before your notice to-night a case of osteitis deformans, not so much on account of the rarity of the disease as on account of it being such a well marked case; in fact, in none of the illustrations which I have seen of the disease have I ever seen one in which the deformities were so well marked.

T. K., male, *æt.* 66, occupation miner, was admitted to the Ballarat District Hospital on January 15th, 1904, suffering from bronchitis and complaining of pain in the back, left hip, left leg and ankles, which was relieved by sitting down, and also inability to straighten his back.

On examination he was found to have the following conditions:—

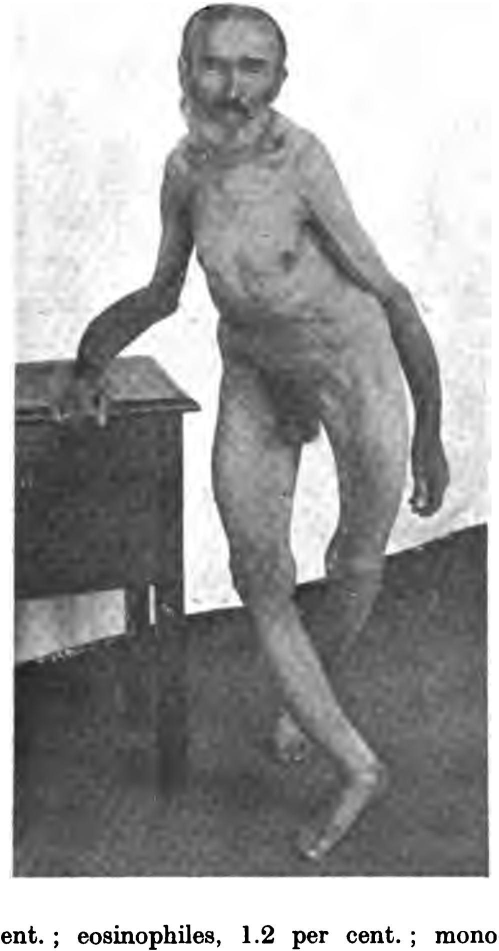
Skull enlarged and flattened on top, giving the head a wedge-shaped appearance. *Spine* markedly kyphotic. *Pelvis* broadened, producing a condition as if the ilia had been pulled apart and the body allowed to sink somewhat down between them. *Thorax* almost quadrilateral, so that the scapulæ came to lie on its lateral surfaces. *Clavicles* bent to an S. *Humeri* curved forwards. *Radii and ulnæ* also bent, with their convexity towards the extensor surfaces, the radii being more bent than the ulnæ.

Femora markedly curved forward, also the necks being bent downwards, so that tips of the great trochanters rise about three-quarters of an inch above Nelatons line, giving rise to a condition of cross leg. *Tibiæ and Fibulæ* also markedly curved forward. Hands and feet apparently free from deformity. Joints in no way affected.

General condition of patient: fairly well nourished, except for muscles of thighs.

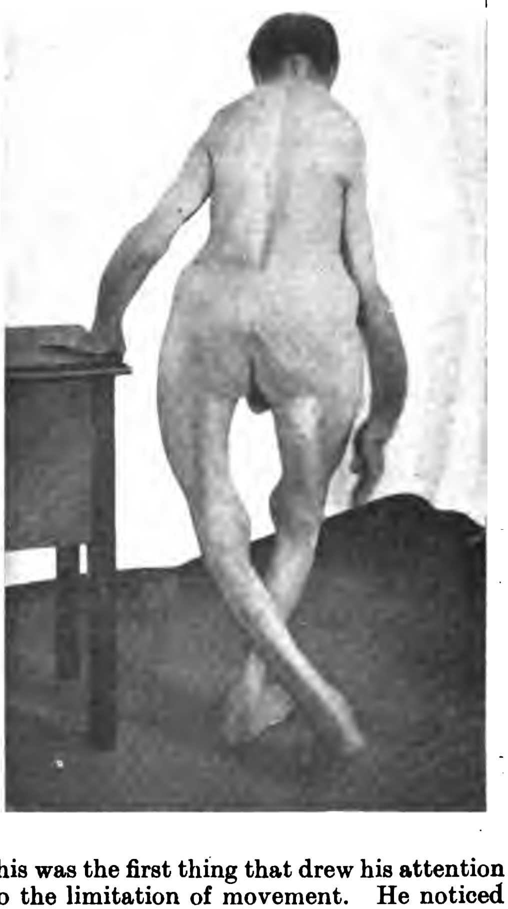
Urine.—Colour, light yellow with slight sediment of amorphous urates; 24 oz. for 24 hours; neutral; sp. gr., 1008; indoxyl, a trace; albumen, faintest trace; sugar, none; bile pig., none; bile salts, a trace.

Blood examination.—Absolute number of red and white corpuscles, apparently normal. Relative number of white corpuscles (Ehrlich's nomenclature): Leucocytes (polynuclear), 58.75 per cent.; lymphocytes, 26.0 per cent.; eosinophiles, 1.2 per cent.; mononuclear leucocytes, 7.5 per cent.; transitional forms, 5.5 per cent.; mast cells, .8 per cent.



I would like you at this point to note the decrease of leucocytes (polynuclear) from 70 to 72 per cent., to 58.75 per cent., and the increase of mononuclear leucocytes from 1 per cent., to 7.5 per cent., and also of the transitional forms from 2 to 4 per cent. to 5.5 per cent.; but the total of all forms of leucocytes in the normal blood and in this case are practically the same, viz., 73 per cent. and 71.75 per cent.

The history of the case as is follows:—17 or 18 years ago, when working in a drive on his knees in the wet, he began to notice pain and weakness in his knees, which he attributed to rheumatics. A short time after these pains came on he noticed that he was unable to straddle a horse or a truss of hay; this was the first thing that drew his attention to the limitation of movement. He noticed that the right radius was bent after a blow on it about seven years ago; the blow apparently only drawing his attention to the condition of the arm. His back he noticed bent about two and a half years ago, when he had to take to crutches. Forty-six years ago his height was 5 ft. 6 in.; seven years ago 5 ft. 3 in.; and at present 4 ft. 8 in.; there having



been a loss of 10 in. He has not noticed that his hat is too small for him, having worn the same hat for three years.

Personal History.—Born in Ireland, Co. Roscommon. At the age of eleven he left there and went to Lancashire, working in the cotton factories for 14 years; marrying at the age of 22. After this he left England and came to Australia, and has lived in Ballarat ever since.

His family history, such of it as is obtainable, is good. He denies having had gonorrhœa or syphilis. In his younger days was somewhat addicted to alcohol. He states that when he was young he was fuller in the chest than other men, and that his mother also had this same condition.

Pathologically this disease consists of a re-absorption of bone substance, and a deposition of new bone substance. The re-absorption takes place both in cancellous substance and in the cortical regions. The deposition of new bone may start from the marrow or the periosteum. In the former case the medullary part of the bone becomes stronger, denser, and its spaces somewhat filled up with new bone. In the latter case the bones become greatly thickened and increased in bulk.

With regard to the blood changes in this case they are apparently unique; at all events it has not been observed before. In most of the cases I could find recorded, the blood had not been examined, and in the few which had been examined there was no blood change noted.

The point of importance and interest in this case is the increase in the mononuclear or baby leucocytes and corresponding decrease in the polynuclear or full-grown leucocyte. Here we have an apparent leucopenia or diminution of leucocytes, but it is only apparent and not real. What we really have is a delay or stoppage in the growth of these cells, preventing or delaying them from reaching their stage of final development, just as if a child of five stopped growing at that age and did not start to grow again till, let us say, ten years of age.

This is of more interest when we consider how many of these cases of osteitis deformans run on into cancer; in fact, out of Sir James Paget's five cases three died of cancer.

In Sir James Paget's paper, read before the R.M. and Ch. Society of London in 1876, in which this disease was first described, Butlin, who was the first to examine specimens of the marrow in this disease, states that he found large nucleated cells in the bone marrow. Now, should these cells be mononuclear leucocytes, it would, I think, be a point in favour of the bone marrow being the manufactory of the leucocytes, for as yet it cannot be decided from which of the blood-producing organs do these cells arise, whether from the spleen or bone marrow.

As regards the diagnosis of this disease, the only diseases with which it might be confounded, when the bending of the bones has taken place, are osteomalacia and multiple myeloid sarcomata. The former nearly always occurs in women, and the first signs usually date from pregnancy. Pathologically the bones are very thin.

Multiple Myeloid Sarcomata, which is extremely rare, and of which I have a specimen, but have unluckily mislaid it, is a diffuse sarcomata affecting the various bones of the body. In this there are albumoses in the urine, and the length of onset of symptoms till death in the only case that I have seen was six weeks. Pathologically the bones are extremely friable.

In the early stage of the disease it might be mistaken for rheumatism, osteo-arthritis deformans, or some chronic periosteal trouble. But until the bending of the bones or the enlargement of the skull sets in I do not think one could definitely diagnose it.

Just before ending I would like to point out that this disease has nothing to do with rickets, which is a disturbance of development. The growing bones are not prevented from ossifying, but having already undergone normal development and acquired normal firmness, they afterwards bend, the bending being due to what might be considered a condition of rarifying osteitis.

As regards the ætiology we know nothing,

Prognosis, as regards recovery, is bad, but generally as regards life, fair, if they escape cancer, which so often follows on, the patient usually living for 15 or 20 years or more, and dying of some other malady.

Treatment.—Curative there is none; rest in bed relieves the pain. To relieve pain if the above fails, one might use potassium iodide, sodium salicylate, or large doses of antipyrine.

(Read before the Ballarat Branch of the
British Medical Association.)

REVIEWS AND NOTICES OF BOOKS.

Text-Book of Legal Medicine and Toxicology. Vol. I. Edited by Frederick Peterson, M.D., and Walter S. Haines, M.D. Philadelphia: W. B. Saunders & Co. Melbourne: James Little, Bourke-street. Price, 25s.

This is the first volume of a two volume work on the subject, and the various chapters throughout it are from the pens of well-known authorities upon the subjects treated of. As in most works of this kind, the treatment of the various sections of the subject is not of equal excellence.

The introductory chapter by the editors is on the subject of expert evidence, and contains some very useful hints to expert medical witnesses. The chapters on identity, the signs of death, and sudden death are by James Ewing, and are among the best in the volume.

A chapter on the subject of gunshot wounds, burns and scalds, by Josiah N. Hall, contains information of the most up-to-date kind, and shows the importance to be attached not only to the wound and its character, but also to the testing of the firearm alleged to have been used. Containing as it does information on the subject of modern explosives, as well as on the old black gunpowder, which is still used in the cheap variety of revolvers, it will, we feel sure, much interest those whose work brings them in contact with gunshot wounds generally.

Two chapters on the subjects of railway injuries and injuries and disorders of the nervous system, following railway and allied accidents, will be read with great interest by all practitioners of medicine, and will be found to contain much sound information on a class of case which, in addition to being very frequently met with, is always surrounded by points of great difficulty.

On the whole, it may with justice be said that this work will fill a useful role as a work of reference, particularly on subjects which are often rather scantily touched upon by the better known text-books on the subject of legal medicine.

The work will, in our opinion, only prove of value as a reference in cases of unusual occurrence, and can in no sense be regarded as a text-book for students and practitioners. The illustrations are not numerous, but those which do appear are of exceptional artistic merit.

Both the editors and their well-known publishers are much to be congratulated upon the work as a whole, as it is distinctly a valuable addition to the literature of a subject which must be of great interest to all members of our profession. S.J.

Nervous and Mental Diseases. By Archibald Church, M.D., Professor of Nervous and Mental Diseases and Head of Neurological Department, Northwestern University Medical School; and Frederick Peterson, M.D., President New York State Commissioner in Lunacy; Chief of Clinic, Department of Nervous Diseases, College of Physicians and Surgeons, New York. Fourth edition, thoroughly revised and enlarged. Handsome octavo volume of 922 pages, with 338 illustrations. Philadelphia, New York, London: W. B. Saunders and Company, 1903. Cloth, $5.00 net; sheep or half morocco, $6.00 net. Price in cloth, 25s. Melbourne: James Little.

The fact that four editions of this work have been ublished in as many years is a sufficient testimony to the value of the book as a useful guide to medicine practitioners and students. We think that the happy combination of the two subjects, "nervous" and "mental" diseases, in one volume, contributes very largely to its success. Too often we are apt to dissociate these two forms of disease, as if gross disease of the nervous system were something distinct from those morbid conditions of the nervous system, which are not manifest to the naked eye or through the microscope, and which are characterised clinically by "mental" disturbances. Owing to progress of knowledge of the pathology of insanity, it would seem as if we would be obliged to look more at the chemical side of the functional activity of nerve tissue for an explanation of mental disease.

The first part of the volume is devoted to the consideration of nervous diseases,and the name of Archibald Church is a sufficient guarantee that this part of the volume has been brought thoroughly up to date. It includes new chapters on "Intermittent Limping," and on Herpes Zoster. Full consideration is given to some of the newer symptoms, sensory disturbances and reflexes.

In the second part of the book, which is written by Dr. Peterson, and devoted to a consideration of mental diseases, a new section has been prepared for this edition by Dr. Adolph Meyer, Director of the Pathological Institute of the New York State Hospitals, under the jurisdiction of Dr. Peterson. This section consists of a critical review of the German schools, which have recently made important changes, in our point of view, in psychiatry.

The work is exquisitely printed on good stout paper, the illustrations are numerous and excellent, and altogether is a storehouse of all the latest knowledge in neurology and psychiatry. G.E.R.

An English Handbook to the Paris Medical School. By A. A. Warden, M.D., with prefatory letters by Lord Lister and Professor W. W. Keen. London: J. & M. Churchill. 1903. Price, 2s.

This little book should be of interest to those visiting Paris, as it gives the name and position of each hospital in the city, and the means of reaching it. It also gives the names of the professors, the physicians, and surgeons who have wards in it, as well as the days and hours of their visits and lectures. Some information respecting the museums, libraries, and medical societies of Paris will also be found in it. W.H.C.

Midwifery for Midwives. By Denison Wiggins, M.R.C.S., L.R.C.P., D.P.H., Assistant Medical Superintendent of the Greenwich Infirmary. London: Baillière, Tindall & Cox. 1904. Crown 8vo. 44 illustrations. Price, 3s 6d net.

This work, which is divided into 24 chapters and an appendix, has been designed to cover the requirements of the examining board authorised by the Midwives Act, 1902 (England). It follows on much the same lines as Haultain and Ferguson, and other works on the same subject, but has two chapters which are not usually included, viz., one on "General Nursing," and another on "The Preparation for an Abdominal Section." We quite agree with the following paragraph from the preface:—"Candidates would be well advised to obtain a certificate of efficiency in general nursing, covering a period of three years, before undertaking this special branch of nursing." The work is very well got up, and should prove of great value to the midwifery nurse. W.H.C.

THE AUSTRALASIAN
MEDICAL GAZETTE.

SYDNEY, 20TH MAY, 1904.

WHAT IS A FRIENDLY SOCIETY?

THE various friendly societies in New South Wales have been holding their annual sessions, and the presidents, while in most cases able to congratulate them upon the increase in their membership and financial reserves, have referred to some of the difficulties which at present militate against that amount of progress which they wish for. Perhaps the most striking of these addresses, and one which has attracted so much attention as to have afforded a text for editorial articles in some of the Sydney daily newspapers, was that delivered by the Grand President of the Druids. In the course of his address he is reported to have said: "Societies and associations that existed primarily for religious or political purposes should not be allowed to obtain the protection and privileges of the Friendly Societies Act. It had already been made evident, and was daily becoming more obvious (more especially in the country districts), that the medical profession were objecting strongly to receiving members of this class of society, the majority of whom were men of position and means, who did not need, and probably would not avail themselves of, the sick and other benefits, but who joined for the sole purpose of furthering their particular views. The whole trouble with the B.M.A. originated with this class of society, and was now fast extending to all branches of friendly societies. In the early days friendly societies existed for the purpose of relieving the sick and needful with medical comforts and sick and funeral benefits, but now the idea was being pirated by all sorts of organisations for the purpose of adding popularity to their cause, which was detrimental to the true spirit, aim, and objects of friendly societies, and, if allowed to continue, would undoubtedly present a grave and menacing problem to be grappled with."

It would appear that at last the friendly societies are coming to regard the situation from the point of view of the British Medical Association, and to agree with us in our attitude towards such organisations as the A.N.A. We have always held that such an organisation, whose true aim is the advancement of the principle "Australia for the Australian natives," is in no sense of the word a legitimate friendly society, and when it tries to pose as a medical benefit society for the sole purpose of attracting and retaining members, it is going about, to use the *Evening News* nomenclature, "in sheep's clothing."

But it is not only against such political associations that the warfare must be waged by the medical profession and the legitimate friendly societies, but against the principle of receiving into the membership of the latter class of society members who are not legitimate claimants for medical benefits at reduced rates, and who join these societies purely from motives of self-interest and advancement. As the President of the Druids has said, the inclusion of members of this kind is a constant source of irritation to the medical profession, who, while always ready to assist any who are in distress and need, are not disposed to expend their strength and energies upon the undeserving and the selfish. The true solution of the difficulty from the point of view of the friendly societies is for them to fall in with the views of the medical profession, and agree to the establishment of a wage limit for all members who seek medical benefits, and to refuse to admit into their orders persons who are already members of other similar organisations. By these means they will protect themselves against the abuse of a member drawing sick pay from several societies, which may total a larger sum than he is able to earn when in good health, and they will also remove one of the greatest causes of disputes between the medical officers and the friendly secieties.

CANCER AND PRECANCEROUS CHANGES.

THE etiology and pathology of the various types of cancerous disease is, perhaps, next to tuberculosis, the most important medical question of to-day ; and in view of the large number of scientific men at work at present on this subject, we may hope that in the near future some definite results will be attained.

A small *brochure* entitled "Cancer and Precancerous Changes," by Mr. G. H. FINK, a retired major in the Indian Medical Service, has recently been sent us, and we have read it with a considerable amount of interest, though hardly with pleasure, since we must confess that at times, owing to the complexity of his sentences, and the introduction of a large amount of extraneous matter, it is somewhat difficult to arrive at the author's meaning. The following sentence will illustrate this :—"The abolition of certain duties on tea, which has become almost a necessity of life at the present time, would enable the consumer to have an article in place of alcohol and beer, which sustains vigour and life by preventing loss of nervous control and lessened vitality, and thus warding off cancer." This is only a fair specimen of the style adopted throughout the book. The author assumes that cancer is a parasitic disease, and that all the changes produced in the body as a result of errors of diet and sanitation are precancerous. He assumes that the cancer parasite flourishes in masses of decaying animal and vegetable matter, and is then conveyed to man by the agency of food, drink and insects. But with these definite statements there is not an atom of proof adduced, firstly, that cancer is really a parasitic disease ; secondly, that the parasite is conveyed in the way indicated, or that these errors in diet and sanitation really favour precancerous changes in the tissues, and ultimately the development of cancerous growths. We know, on the other hand, that cancerous disease not infrequently develops in persons who are apparently in the best of health, and whose constitutions have not been weakened by dietetic and sanitary errors. Although in past times several observers have described in cancerous structures certain appearances which have been strongly suggestive of parasites, intracellular or intranuclear, yet so far no one observer has succeeded in isolating an organism from cancerous growths which has fulfilled all of KOCH's postulates.

The most recent account of such an organism was given by Mr. KEITH MONSERRAT, of Liverpool, at a meeting of the Pathological Society of London held early in the present year. He claims to have isolated from carcinomatous growths in the human mamma, a parasite which presents a life history in which two cycles can be traced, one a vegetative budding cycle and another a sporulating cycle. He claims to have cultivated this organism, and to have succeeded in inoculating animals with it and reproducing carcinomatous growths in them. These experiments may possibly be confirmed by other observers, and if so, it would appear as if we were on the track of the discovery of a true cancer parasite. But it is significant that at the meeting at which this communication was made, two well known and skilled pathologists, Dr. LAZARUS BARLOW and Mr. S. G. SHATTOCK, were not disposed to accept Mr. MONSERRAT'S conclusions as to the etiological connection of the organism he isolated with the carcinoma. Mr. SHATTOCK suggests that possibly the organism described may be the pathogenic factor of the mastitis which so commonly antecedes carcinoma of the mamma and not the true cause of the carcinoma itself. He did not think it proved that the tumours produced by the inoculation of the organism into the animals were truly carcinomatous in character.

As so many futile attempts have been made to isolate and cultivate a cancer parasite, and as several apparently successful attempts have not been confirmed by subsequent observers, the pathological world is disposed to look askance at any reported discovery of a new cancer parasite, and a large consensus of opinion is now definitely opposed to the parasitic theory. It remains to be seen whether this latest discovery of Mr. MONSERRAT'S will stand the scrutiny of strict scientific investigation by other workers. We can await events in the hope that the life history of the cancer parasite, if there be one, will speedily be worked out, so that protective measures may be devised to prevent the spread of the disease.

THE MONTH.

The Prevention of Infantile Mortality.

As announced in another column, Dr. Mary Booth, of Sydney, has been appointed as lecturer under the Department of Public Instruction, on "Infant Hygiene," at the Training College and the higher classes of the girls' schools in New South Wales. We presume that this appointment has arisen out of the recent recommendations of the Royal Commission on the decline of the birth rate, and as Dr. Booth has always shown a deep interest in the needs for a fuller knowledge of this subject among girls, we think the Government are to be congratulated upon having acted promptly in securing her services in this capacity, and we have no doubt the appointment will be justified by beneficial results in time to come.

An Hospital for Consumptives in Adelaide.

During the last session of the South Australian Parliament the Government agreed to provide a home for the use of chronic consumptives, and the Minister recently selected for the purpose the old lunatic asylum on the North Terrace, in one of the corners of the city adjoining the Botanic Gardens. Considerable objection was taken to this site by a large section of the public, for the special reason that consumptives should not be segregated so near the city. Mr. J. H. Angas then generously offered as a free gift to the Government the old Belair Inebriate Retreat, a fine block of buildings at Belair, in the Hills, a few miles from Adelaide. The Government has accepted the offer. The Premier states that it will be necessary to expend about £1000 to alter one part of the Belair Retreat to make it fit to receive consumptives.

Federal Quarantine Laws.

It is satisfactory to learn that the question of the Federal control of quarantine is assuming definite shape. Dr. Ham, Commissioner for Public Health in Queensland, has forwarded a memorandum upon the subject to the Boards of Health in the different States, and it is suggested that a conference of health authorities should be held as soon as possible in order that uniform quarantine laws may be drafted. It is reported that the Queensland Premier has brought the matter before the Federal Government, urging them to introduce the necessary legislation for this purpose. Unfortunately, there appears little hope of definite steps being taken in this direction at present, since questions affecting the public health seem to trouble the Governments very little, unless forcibly impressed by a serious actual or threatened epidemic of infectious disease.

Treatment of Inebriates.

The hopelessness of attempting to reform inebriates by repeated short terms of imprisonment in gaols is well known, and some radical alteration in the methods of dealing with this unfortunate class is imperatively necessary. Captain Neitenstein, the Comptroller of Prisons in New South Wales, in the course of a recent report on the methods of treatment of inebriates adopted in various institutions throughout the world, points out that English legislation on the subject had been greatly developed of late. The Inebriates' Reformation and After-care Association of Great Britain, which had recently been formed in England, had for its objects :—(*a*) To promote the reformation, physical, moral, social, and industrial reclamation and general restoration of inebriates and of persons addicted to the excessive use of alcoholic drinks, drugs or narcotics ; (*b*) to provide for the after-care of persons who have been inebriates, and especially of those who have been in homes for inebriates, and to provide an intermediate stage or condition of modified control before restoration to absolute freedom of action ; (*c*) to stimulate and assist county councils, borough councils, and other authorities in carrying out the law, to give assistance to magistrates and others in dealing with cases, and to be a centre of information and co-operation in all matters connected with the reformation of inebriates. The value of such an association in any system of dealing with inebriates cannot be over-estimated.

Prevalence of Miners' Phthisis in Victoria.

At a meeting of the Victorian Association for the Prevention and Cure of Tuberculosis, held recently under the presidency of Dr. Jamieson, some statistics bearing upon the prevalence of miners' phthisis in Victoria were supplied by Dr. Cowen, of Eaglehawk. He stated that during the 20 years ended 1901 318 deaths from tuberculosis had occurred locally. Up to 45 years of age the death rate was about equal in both sexes. After that age the deaths among the men were as 13 to 1 as compared with the women. The majority of the men were, or had been, miners. In 1902 the number of deaths at Eaglehawk from all causes was 83, and from tuberculosis 26. Of the latter, 9 were females and 17 males. Of the males, all were either miners or ex-miners. Not one of the other deaths amongst males not miners was due to tuberculosis. Some statistics were also supplied by the Ballarat Miners' Association. On the books at present there were 49 men suffering from miners' complaint, and in the district there were fully 50 more. Since 1898, 85 miners had died from this disease, and in respect of these deaths there had been paid away the sum of £2498. It was thought by members of the association that these figures did not fully represent the facts of the case, inasmuch as it was known that many men, on becoming ill and leaving off work in the mines, left the district. A more cheerful part of the discussion was that which tended to show that in South Africa and America, where preventive measures, together with better ventilation, were adopted, the death rate amongst miners was comparatively low.

The Administration of Anæsthetics at the Melbourne Hospital.

At a meeting of the committee of the Melbourne Hospital held last month, the chairman addressed the new resident medical officers upon the importance of their being fully qualified to administer anæsthetics. He stated that the committee intended to make new rules and regulations regarding the use of chloroform. In the course of an interview one of the members of the honorary medical staff remarked that at the Melbourne Hospital, in a period of five years ended December, 1903, there had been 10 deaths under chloroform, while at four other hospitals there had been 12 deaths; yet the greater number of operations had been performed at their institution, and the number of difficult cases had been greater also. It might be admitted that the death rate had been somewhat too high. They expected to reduce this by substituting ether for chloroform as the general anæsthetic, so that the latter would be used only when ether was contra-indicated. The medical profession was undoubtedly in favour of ether to-day, and in Great Britain, the United States, and possibly in France and Germany as well, it had superseded chloroform. They expected to further reduce the death rate by safeguarding the administration of anæsthetics as far as it was possible to do this. Thus it was intended, where practicable, to have chloroform administered by the honorary anæsthetists attached to the institution. If an emergency case arose it would only be given by those members of the resident staff who had been trained under the anæsthetists. In this connection it is stated that Professor Allen is in favour of medical students at the Melbourne University obtaining a certificate of competency in anæsthetics before being admitted to their B.S. degree. A proposal to this effect is now under consideration.

A Queensland Branch of the Australasian Trained Nurses' Association.

A well-attended meeting of those interested in the formation of a Queensland branch of the above association took place in the Technical College last month. The chair was taken by Dr. Hopkins. Dr. McLean read a letter from Dr. Sinclair Gillies, one of the joint honorary secretaries of the association in Sydney, enclosing a draft of the rules, and offering suggestions as to the formation of the council. The proposed rules were then submitted to the meeting and adopted almost unanimously. It was decided that the governing body should be as follows:—President, Dr. Jackson; vice-presidents, Dr. Halford and Miss Weedon; hon. treasurer, Dr. Page; joint hon. secretaries, Dr. McLean and Miss Appleton (Lady Lamington Hospital); council, Drs. Brockway, Lockhart Gibson, Hopkins, Marks, Sutton, and Turner (representing general nurses), and Nurses Marks (matron General Hospital), F. Chatfeld (Diamantina), Fitzgerald (Victoria Hospital), Marshall (St. Helena), Pampling (senior charge nurse, General Hospital), Cross, Durdin, McNish, Macpherson, C. Smith (late Wattlebrae), Trundle (matron Victoria Hospital), and A. Waldie. The representatives of the midwifery nurses on the council will be Dr. Wilton Love and Nurses Brown (matron Lady Bowen Hospital) and Lucy Scott. After some formal business had been arranged, Dr. Halford proposed a vote of thanks to the joint honorary secretaries, Dr. McLean and Miss Appleton, for the manner in which the initiatory work and the taking of the ballot had been conducted.

The Macleay Science Fellowships.

The late Sir William Macleay, in his last will, executed in December, 1890, provided for the payment to the Linnæan Society of New South Wales of a sum of £35,000, to be devoted to founding research Fellowships. This sum, less certain duties, was paid over in October last, and has been invested at 4 per cent. per annum. It has been thought prudent to allow the income to accumulate for a time, but during the current year the council will be able to invite applications to fill three Fellowships with an emolument of £400 a year. A fourth was contemplated, but for this the income will not immediately suffice. "The Fellowships are intended to encourage and advance research in natural science by enabling those who wish to continue their studies at the University and elsewhere after having completed the regular curriculum and taken a science degree to do so." The Fellow must be a member of the Linnæan Society, must employ himself solely in original investigation, and must have taken a science degree in the University of Sydney. "The same Fellows may be, and it is my intention and wish that they should be, re-elected from year to year, so long as the Council of the Linnæan Society of New South Wales is satisfied with the quantity and the quality of their work." It is further provided that "the subjects of investigation undertaken or assigned to Fellows shall be all branches of natural history, biological and geological." We understand that the Council of the Linnæan Society will be prepared to make appointments to these Fellowships in the course of two or three months, and any intending candidates should forward their applications to Mr. J. J. Fletcher, the secretary of the Linnæan Society, at the hall, Elizabeth Bay, Sydney.

ERRATA.—In Dr. Lockhart Gibson's paper on "A Plea for Painted Railings and Painted Walls of Rooms as the Source of Lead Poisoning amongst Queensland Children," published in our last issue, the following printer's errors occurred:—On page 150, line 37, "only a trace 1 *milligram*, etc.," should read .1 *milligramme.* Page 152, line 9, "on *moist* painted," should read "on *most*." Page 149, line 19, the word *and* has been substituted for *to*. Page 150, line 8, the word *is* has been omitted between "disc" and "in." In Dr. J. A. G. Hamilton's paper on "An Unusual Accident to a Fibroid Tumour of Uterus, Complicating Pregnancy," published in our last issue, the following printer's errors occurred:—On page 160, 2nd column, line 31, "A.E.Q.," should read "A.C.E."; page 161, 1st column, line 4, "or a quart" should read "and a quart"; 2nd column, line 6, "flaccus" should read "flatus"; line 21, "pulse 150 to 160 fuller than tympanitic, in front" should read "fuller than on Saturday, abdomen tympanitic"; line 43, "cervix" should read "liver"; line 46, "larger" should read "layer"; line 54. "of rectal" should read "and rectal"; on page 162, line18, "vein gave way" should read "vein which gave way."

Hospital Saturday Fund.—The total contributions to the Sydney Hospital Saturday Fund amounted to £4673 9s 9d on May 7th. Of this amount the sum of £4124 2s 11d was collected by holders of boxes on Saturday in the city and suburbs. The collection constitutes a record, and the street contributions are over £351 in advance of last year. A computation shows that the copper coins given weighed nearly three tons, and that 470,000 coins were collected

BRITISH MEDICAL ASSOCIATION NEWS.

PROCEEDINGS OF AUSTRALASIAN BRANCHES.

New South Wales.

The regular monthly meeting of the Branch was held on Friday, 29th April, 1904, at the Royal Society's Room, at 8.15 o'clock; Dr. A. MacCormick (President) in the chair. There were 34 members present.

The minutes of the previous meeting were read and confirmed.

Dr. G. E. Rennie read a paper on "Myasthenia Gravis," with notes on two cases. (See page 205).

Dr. Charles MacLaurin, although he was not familiar with the disease clinically, thought it would be a pity if some discussion did not take place upon the paper. He was interested specially in the remarks upon the result of experimental removal of the thymus gland.

Dr. Gordon Craig wished to emphasise one point as to the possibility of the first case being due to the toxic influence of tobacco. They were all familiar with the intermittent heart and optic nerve atrophy which were due to tobacco poisoning, and he thought it possible that the symptoms in this case might be explained upon a similar hypothesis.

Dr. Mills had never seen a case of myasthenia gravis, although he was familiar with the literature of the subject. He thought that there was some doubt in Dr. Rennie's own mind as to the first case being one of true myasthenia gravis. The facts that the patient could swallow fluids, that the knee-jerks were not exhausted upon repeated elicitations, and that the myasthenic reaction was confined to the leg, he considered raised a doubt as to the diagnosis. He thought that Dr. Craig's suggestion of tobacco poisoning being possibly the cause of the condition was a good one. It appeared most probable that the disease was of toxic origin, and these two cases supported that theory.

Dr. Sinclair Gillies had seen Dr. Rennie's first case when in the ward at the Royal Prince Alfred Hospital. He had subsequently seen him in his own out-patient department at the hospital, when his symptoms were still present, but less marked. Since his discharge from the hospital he had not smoked at all, so that the symtoms could, he thought, hardly be attributed to tobacco poisoning. He had no doubt, from his own examination of the patient, that it was a case of myasthenia gravis. He had read in the *Medical Annual* of a case in which post-mortem examination revealed the presence of a lymphosarcoma involving the thymus in the mediastium, and the muscles showed an infiltration with lymphoid cells. This, however, was only one case, and it was improbable that every case of myasthenia gravis would show the same pathological condition.

Dr. Sydney Jamieson was familiar with the disease from reading the literature, although he had never seen a case. He had read Myer's article in the *Journal of Pathology*. He would have liked to hear Dr. Rennie's opinion as to the treatment of this condition. It appeared that rest was the most important element in treatment.

Dr. Rennie, in reply, stated that he had no doubt whatever in his mind as to the first case being one of asthenic bulbar palsy. He would not have been surprised if it had been suggested that the case was one of diphtheritic paralysis, but the affection of the external muscles of the eyes, the facial paresis, the alteration in the character of the voice, the dyspnœic attacks, and the absence of any history of preceding sore throat, or any antecedent illness, with the gradual onset of the symptoms, to his mind clinched the diagnosis of asthenic bulbar paralysis. He had never heard or read of any such grouping of symptoms being due to tobacco poisoning.

Dr. Stacy read a paper entitled "A Record of Post-mortem Examinations, with Clinical Notes." (To appear in a future issue.)

Dr. Sydney Jamieson said that he had, of course, seen a large number of the post-mortem examinations referred to by Dr. Stacy. As regards the question of low temperatures, which occurred in some cases of pneumonia and other severe septic infections, it was, of course, well known that profound toxæmia tended to depress the body temperature generally. Upon the question of the relative danger of death after chloroform and ether, he remarked that he had been brought up in a school in which the use of chloroform had been advocated in preference to ether. In his own personal experience he could say that he had frequently seen patients upon the operating table anæsthetised with ether, who in the course after operation became cyanosed, with cold extremities, and three or four days later he had seen them in the post-mortem room with signs of broncho-pneumonia. He did not agree, therefore, that chloroform was a more dangerous anæsthetic than ether.

Dr. Rennie thought Dr. Stacy's paper interesting, as emphasising the importance of collating clinical histories with post-mortem appearances. They were sometimes apt in the post-mortem room to neglect this.

Dr. Litchfield said that the relation of the pulse rate, respiration rate, and temperature was more important than the same record of either separately. The character of the respiration was very valuable in diagnosis and prognosis. In broncho-pneumonia the respiration was laboured. In lobar pneumonia it was quiet, except where the heart became embarrassed. A laboured respiration in lobar pneumonia betokened heart failure.

Dr. Stacy stated that as regards the remark of Dr. Jamieson, there was no doubt that the anæsthetist was much happier when administering ether than chloroform. In reply to Dr. Litchfield, the character of the respirations were not noted on the case sheets. In his experience a high temperature with a relatively slow pulse was almost diagnostic of enteric fever. He had not met with a case of pneumonia in which the pulse was below 100 during the febrile period.

Dr. Maitland read notes on three cases: (*a*) A case of severe and prolonged mononephrus hæmorrhage—nephrectomy. (*b*) A rare form of tumour of the small intestine—excision with end to end anastomosis. (*c*) A congenital malformation of the gall-bladder, complicated with cholelithiasis—removal of gall-bladder. (See page 212.)

Dr. Hinder considered Dr. Maitland's cases interesting, and the account of them, he was sure, gave them much pleasure. Time would only allow him to speak of the renal case. He hardly thought the kidney should have been removed A nephrectomy could never be less serious than a nephrotomy, and although he had seen seven cases of that character the hæmorrhage had always ceased after decapsulation and nephrotomy, and the blood lost had been trifling. In one of these cases the hæmorrhage did not cease until six weeks after the operation, so that it would be hard to say whether the interference was certainly the cause of the cessation. In all cases of hæmaturia, where stone, tubercle, malignant or other growth can be excluded, nephrotomy should precede nephrectomy. In his own cases it had always been sufficient, and some of them had suffered from continuous hæmaturia for some time before operation.

Dr. R. **Steer Bowker** considered Dr. Maitland's first case particularly interesting, and he thought the treatment adopted to be the correct one. He had recently read of a potato bobbin being used. Coffey's potato bobbin was very simple, and could be obtained in a moment in any house. A thin bobbin is cut from a potato, carrot, or parsnip; it is slipped into the paroximal end of the gut, and held there whilst the distal end is drawn over it and is slightly overlapped by its edge, the edge of the paroximal portion; then two hare-lip pins, or even bonnet pins, are made to transfix the overlapping edges at right angles (through the bobbin), then a continuous suture stitches the gut together, the pins are removed, freeing the bobbin, which is shifted from the site of the anastomosis and broken up by hand pressure so that it can easily pass down the gut.

Dr. **Corlette**, referring to the case of Mrs. X., stated that in the earlier stage of the disease, exercise certainly increased the amount of blood. The case was not brought under operation earlier owing to the abhorrence of operation produced by several operative calamities among near relations. As to nephrotomy *v.* nephrectomy, whatever might be said in its favour in particular cases, he was absolutely certain that the attempt to do a nephrotomy in the present case would have meant the death of the patient. The total absence of all secretion from the right side, except a little blood, during a prolonged examination by segregator, was worthy of remark. Might it be possible that the interpretation of the slight dull ache or discomfort on the healthy side, felt coincidently with the onset of hæmaturia, and for a considerable time after, was due to increase of function on that side following on some arrest of function, perhaps of nervous origin, in the right kidney? This was supported by the fact that the patient passed 37 oz. clear urine within the first 24 hours after nephrectomy of the right kidney, the amount being as large as that passed before the operation, even with two kidneys. It would look as if the left kidney had received its training and begun to do whole duty even before the operation, so easily did function proceed. Somewhat against this was the normal size, apparently normal appearance, of the substance of the removed kidney. If function does really tend to become inhibited on the diseased side in these cases, it would add to the confidence with which nephrectomy might be advised as against nephrotomy. There was one other point: the patient gave a history of an illness described as "influenza" one month before the first onset of hæmaturia. Whether it had any importance in relation to the succeeding disease he could not say.

Dr. **Sydney Jones**, senr., had first seen the third case described by Dr. Maitland three years ago, in consultation with Dr. Corlette. At that time there was frequently no blood visible in the urine first thing in the morning, but on moving about it always appeared. What pain she had was not severe, but was in the left side, in the course of the ureter. He diagnosed stone in the pelvis or ureter of the left kidney. He wished to emphasise the fact of the pain having been in the left side, because had the case occurred before the introduction of the cystoscope and an operation performed, it would certainly have been done on the left side. The disease, as Dr Maitland has pointed out, proved to be on the right side. He saw the patient again last year, when the hæmaturia had become more profuse and persistent, and she had lost ground. The urine contained no blood casts. He was now disposed to think that the hæmaturia was attributable to a villous growth in the pelvis or ureter. All general causes of bleeding, such as hæmophilia, purpura, scurvy, tubercle, cardio-vascular change, and Raynaud's disease could be excluded. He had recently read an article by Professor Eshner, in the *American Journal of Medical Sciences*, on 48 cases of unilateral renal hæmaturia, in which he points out that 60 per cent. occurred between the ages of 20 and 40 years. Dr. Maitland's patient was 37 years old, and came, therefore, within this age limit. The diagnosis of the seat of the bleeding in many of Professor Eshner's cases presented great difficulty, and could only be made by catheterisation of the ureters or by direct inspection of the vesical orifices of the ureters after cystotomy. Professor Eshner concludes that if rest in bed and medical measures fail, the kidney should be exposed and examined, and, if necessary, incision should be made, and perhaps the capsule stripped off; if unduly movable, nephroraphy should be performed; if the bleeding should continue, nephrectomy must be done. He (Dr. Jones) was satisfied that the treatment adopted by Dr Maitland was the correct one under the circumstances.

Dr. **Litchfield** said that if the observation of suppression of urine in the diseased kidney was correct, then there was probably some disturbance of the circulation through the kidney. Had the question of some obstruction to the renal vein been investigated in these cases?

The **President** said that during the last 20 years he had only seen three cases of true painless hæmaturia. In his last case, examination by the cystoscope showed the bleeding to be taking place from the kidney on the opposite side to that on which the dull aching pain existed. He had removed the kidney, and Professor Welsh had reported that he could find no pathological change in it. He considered nephrectomy to be the appropriate treatment, and that Dr. Maitland had done right in adopting this course in his case.

Dr. **Maitland**, in reply, said the chief point in the discussion had been whether a nephrotomy or a nephrectomy should have been done in the renal case that he had recorded; the only advocate for nephrotomy was Dr. Hinder, and he showed a want of appreciation of the conditions present in the case, it having been clearly laid down in the remarks on the treatment that he (the speaker) advocated decapsulation with nephrotomy in early and not severe cases, but that in this case he had done a nephrectomy because of the desperate condition of the patient, and also because if the hæmorrhage was not immediately stopped the patient would have died. Nephrotomy to be of any use must destroy the vascular arches at the bases of the pyramids affected. He had stated that nearly all the pyramids were affected—a condition that it was evident could not have possibly been cured, as Dr. Hinder suggested, by a nephrotomy. Henry Morris, in his vast experience, had only had three cases: one died without operation, two died after nephrotomy; in one of them he followed by a nephrectomy, and he (the speaker) felt that these two cases might have been saved if a nephrectomy had been done instead of the nephrotomy. Dr. Litchfield has mentioned the possibility of a thrombosis of the renal vein being the cause of the hæmaturia. Thrombosis of the renal vein was acute in character, with agonising renal pain, bearing no resemblance to the case recorded. One case that he saw was accompanied by the most intense renal pain, and ended fatally after a fortnight's duration. Dr. Corlette's suggestion that the left renal ache might have been due to the kidney taking on increased work was a reasonable one, and he had frequently seen, after nephrectomy, patients complain of pain, or rather, ache in the remaining kidney for a considerable time after the operation. Dr. Steer Bowker had mentioned a potato bobbin as an aid in intestinal anastomosis. The idea was an ingenious one, and although he had no experience of such a bobbin, still he thought it would act well.

South Australia.

THE monthly meeting was held at the University at 8 p.m. on Thursday, April 28th, 1904.

There were 40 members present, and Dr. Jay, president, occupied the chair.

The minutes of last meeting were read and signed.

Drs. SWIFT and NEWLAND showed cases.

Professor WATSON showed the following pathological specimens: (1) Diffuse carcinoma, which simulated a sloppy myoma of the corpus uteri, which latter was enlarged to the size of a fœtal head. It was successfully removed by the abdominal route from a metrorrhagic multipara, *æt.* 50.—*Dr. Poulton.* (2) Carcinoma of pyloric half of stomach, forming a rigid tube leading out of a dilated but otherwise healthy cardiac portion. A palliative gastro-enterostomy was successfully performed.—*Dr. Poulton.* (3) Tuberous carcinoma of lesser curvature which produced no obstruction symptoms either into or out of the stomach. Patient was advised against operative interference. In any case its ablation was impracticable.—*Dr. Poulton.* (4) Dorsal vertebræ of a paraplegic male, *æt.* 25. Numerous burrowing hydatid vesicles had been removed from spinal canal with apparent benefit several months before death. Section of the specimen displays three elongated vesicles occupying the extra-thecal space, and compressing the spinal cord.—*Dr. Poulton.* (5) Upper jaw of a woman *æt.* 34. The antrum of Highmore is occupied by a giant-celled sarcoma, attached to the orbital plate. Suspecting empyema, the surgeon extracted a carious molar, and drained for a few days, when the growth began to show in the orbit and cause diplopia, but no pain, although the infra-orbital nerve was partly destroyed by the neoplasm. When the jaw was excised, the soft palate, pterygoid plates and maxillary tubercle were carefully avoided, and the resulting deformity is amazingly slight.—*Dr. J. A. G. Hamilton.* (6) Limited and shallow ulceration of rectal mucosa from an old woman who lost the use of her limbs a few days before she died, exhausted by hæmorrhage. After death, the whole colon as far up as the hepatic flexure was found full of pasty brick-coloured blood, without any corresponding mucosal lesion higher up.—*Dr. J. C. Verco.* (7) Adenomatous prostate, weighing 5½ oz. It was shelled out by Freyer's method with the greatest ease in one single piece, with part of prostatic urethra attached. It resembles in shape a small uterus, with fantastically arranged subserous myomata, one of which (middle lobe) is the shape of a man's thumb. The patient, *æt.* 76, is doing very well.—*Capt. L. W. Bickle.*

A letter was read from the Chief Secretary, asking for the opinion of the meeting on the rival sites for the proposed Chronic Consumptives' Home.

On being put to the meeting, it was carried by a large majority that a discussion on the subject should take precedence of the agenda. The press having asked for admission to the meeting, it was decided by the meeting that the press be not admitted.

A long discussion of the two sites ensued, in which 12 members spoke, and several motions were proposed.

The feeling of the meeting was very decidedly in favour of the North Terrace site, but it was finally agreed that before giving an answer to the Chief Secretary's question, both sites should be inspected, and the honorary secretary was instructed to make the necessary arrangements, to notify the Government of the decision of the meeting, and to also give a *resumé* to the press.

Queensland.

A MEETING of the Queensland Branch was held on Friday, May 6th, at the School of Arts, Brisbane; Dr. W. S. Byrne (president) in the chair, and an attendance of 17 members.

Dr. WILTON LOVE exhibited a woman suffering from progressive muscular atrophy, whom he had exhibited at the Medical Society eight years previously. The right arm and shoulder had first become affected, then the left leg, the left arm, and last, the right leg. Her attitude when standing was characteristic, a vertical line from the shoulders falling clear of the buttocks, and her abdomen being protuberant. There had been fibrillary twitchings of the affected muscles. The atrophy was very marked in the hand. Her gait, method of getting from a sitting position, and picking up objects from the table were shown.

A letter was received from the Department of Health stating that "pulmonary tuberculosis" had been placed on the list of notifiable diseases, and that the examination of sputum of suspected patients would be undertaken free of charge by the Government Bacteriological Institute.

A letter with reference to "cancer research" was referred to the Council.

Dr. LOCKHART GIBSON read a paper on "The Post-mortem Appearances of a Case of Hemianopsia," illustrated by photographs of the brain, and the brain itself.

Dr. A. C. F. HALFORD read a paper upon "Methods of Infection."

Dr. TURNER cordially agreed with the paper, and narrated some cases which appeared to bear out the theory of the conveyance by flies of typhoid infection. He thought that there were two methods of aërial infection of disease, (1) as in the case of influenza where the spray from coughing might cause infection to a near person, and where the infecting germs were short-lived; (2) where the virus was long-lived and was contained in dust, as in the infection of phthisis.

Dr. WILTON LOVE narrated an interesting case where five persons in the family of a dairyman were ill with typhoid fever, and from which no less than 28 cases were traced as having been caused by the infected milk; also of cases, which had arisen in an orphanage, traced to the use of a patent manure prepared from human excrement.

Dr. FANCOURT MACDONALD said that it would be interesting to know what proportion of persons placed under the same infective influence contracted or escaped the disease.

Dr. HALFORD, in reply, emphasised the virulence of fresh virus.

Reports of Other Societies.

THE NEW SOUTH WALES MEDICAL BENEVOLENT FUND.

At a meeting on March 25th, Dr. **Maitland**, hon. secretary, read the balance-sheet of the fund, which was adopted.

Dr. **Crago** proposed the following gentlemen as office-bearers to the fund for the ensuing year:—Hon. treasurer, Dr. Faithfull; hon. secretary, Dr. Maitland; committee, Drs. Macdonald Gill, F. W. Hall, and F. H. Quaife.

THE TREASURER IN ACCOUNT WITH THE NEW SOUTH WALES MEDICAL BENEVOLENT FUND.

Dr.	£	s.	d.
1904.			
Balance brought forward, March 31st, 1903	90	2	6
Subscriptions received from March 31st, 1903, to March 31st, 1904	24	5	6
	£114	8	0

Cr.	£	s.	d.
1904.			
Money disbursed to various deserving cases as decided by the committee, from March 31st, 1903, to March 31st, 1904	10	12	0
Stamps	1	2	6
Printing	1	2	6
Exchange on cheques	0	5	0
Bank fees	0	10	0
Balance at credit, as per Pass Book ..	100	16	0
	£184	8	0

	£	s.	d.
At deposit, Savings Bank of New South Wales as per Pass Book, with accrued interest to Dec. 31st, 1903	126	2	6
Balance at credit in current account in the Commercial Banking Co. of Sydney, Bathurst-street branch	100	16	0
Total credit at this date	£226	18	6

E. & O. E.

R. C. FAITHFULL,
Hon. Treasurer.

Audited and found correct.
CYRIL E. CORLETTE.
March 31st, 1904.

WESTERN SUBURBS MEDICAL ASSOCIATION.

The fourteenth annual meeting was held in the Petersham Town Hall on April 27th, 1904. The treasurer's report was read and adopted. The retiring president, Dr. Hetherington, in his address, referred to the different items of interest that had occurred during the year. The ballot for the election of officers for the ensuing year was declared:—President, Dr. Cecil Purser; vice-presidents, Dr. R. B. Wade and Dr. A. E. Perkins; hon. treasurer, Dr. Allan; hon. secretary, Dr. Lipscomb; council, Dr. Hetherington, Dr. Lawes, Dr. Frizell, Dr. Hinder.

Medico-Ethical and Medico-Legal.

A Serious Charge.—At the recent sittings of the Central Criminal Court, Sydney, before Mr. Justice Pring and a jury, Frederick William Marshall, a duly qualified medical practitioner, pleaded not guilty to a charge of illegally using an instrument upon Ethel Ogilvie, a married woman, at Sydney, on January 29th last. The jury, after having been locked up all night to consider their verdict, could not agree. His Honor then discharged them. Mr. Pollock asked that the accused might be remanded to the next Criminal Court, or such other court as the Attorney-General might appoint. Accused was released upon recognisances being entered into, himself in £80 and two sureties in £40.

Country G.P. writes:—"A multipara recently consulted me as to the propriety of having abortion procured. She has missed two periods and has an enlarged womb. Some 12 months ago I attended her in a confinement, when she was delivered of a feeble child, probably of eight months' development. The mother had uræmic symptoms and had as much as one-third albumin. After the birth, the child slowly perished and died at the age of four or five months. The mother gradually improved, and apparently regained her health. Now she has albuminuria, probably one-tenth. I sent her to my nearest neighbour for an opinion as to the advisability of emptying the womb. Unfortunately, he does not seem to grasp the subject, and advises against interference. What am I to do? I have not a shadow of a doubt as to the advisability of procuring abortion, but do not wish to put myself to the ignominy of being misunderstood, not to say maltreated. The patient is the wife of a mechanic, with a fairly numerous family, and hence economy is a necessity. If I consult a consultant in Sydney by letter, would his concurrence be sufficient to cover me in the event of active measures being adopted should the legal aspect of the question be obtained? An authoritative utterance on your part on this subject might be of much interest to some of our brethren whose lot is cast in lonely places like mine."

[*** In reply to this question, we do not think that "G.P." should diverge from the accepted rule that abortion should only be induced if the continuance of pregnancy is a source of danger to the life of the mother. The fact that after her previous pregnancy she developed uræmic symptoms and was delivered of a feeble child, in our opinion, should not influence "G.P." in his line of action. If definite eclampsia occurs, then emptying of the uterus is the treatment to be adopted; but if "G.P." proceeds to empty the uterus now, on no other grounds than those above submitted, then we fear he will expose himself to grave censure.—Editor *A.M.G.*]

REVIEW OF CURRENT MEDICAL LITERATURE.

MEDICINE.

The Prognosis of Pleural Effusions.

Sears (*Boston Medical and Surgical Journal*, February, 1904) discusses the conclusions to be drawn from a study of 439 cases of pleurisy which have been treated in the Boston City Hospital between the years 1880 and 1895. These cases include only those in which no suspicion arose that the acute attack was a secondary manifestation of some process already existing. They are grouped together as instances of acute idiopathic pleurisy, the pleurisy *a frigore* of the older writers, without regard to their possible etiology. They have been studied with the sole purpose of determining whether they threw any light on the question of prognosis, which has assumed importance in view of the fact that insurance companies are beginning to consider that an attack of pleurisy is sufficient ground for postponing the acceptance of a risk until a certain probationary period has been passed. Twenty per cent. of these 439 cases are known to have died within 17 years, and this number may possibly be increased to 25 per cent., if doubtful cases are included. Out of the 86 who have died, 30 died within two years of the attack; 26 died within two to five years later; 15 died in five to ten years later; 13 died in 10 to 15 years later, and two in 15 to 17 years later. The causes of death appear as follows: Phthisis, 45; pleurisy, 5; empyæma, 1; bronchitis, 3; œdema of lungs, 1; pneumonia, 6; meningitis, 3. The other causes of death assigned are intestinal obstruction, nephritis, apoplexy, heart disease, typhoid fever, chronic hepatitis, gastritis, alcoholism, and accidental. The difficulty of connecting the deaths with the attack of pleurisy is obvious in many cases, but where death has resulted from pleurisy or empyæma, the relation is clear. The connection between the attack of pleurisy and the cause of death is more than probable (considering our present ideas as to the etiology of cases of idiopathic origin), when some form of tuberculosis has been assigned, of which there were 45 cases, and probable where death has been certified as occurring from œdema of the lungs of five months' duration, bronchitis, or meningitis. Over 39 per cent. of the deaths among the patients who could be definitely traced had occurred within two years, and over 70 per cent. within five years. Sears considers that while there is a difficulty in interpreting these figures correctly, they are sufficiently striking to give rise to the suspicion that an attack of pleurisy may be a manifestation of a constitutional taint, which may be the cause of death years afterwards. They do not show how great this danger is, but the following conclusions may be drawn:—(1) That about 10 per cent. of these cases are known to have developed tuberculosis; (2) that over 55 per cent. of all cases which were followed to their death had died from some form of tuberculosis; (3) that tuberculosis, when it occurred, developed within five years in over 50 per cent., and within 10 years in over 70 per cent.; (4) that this danger is much increased by a tubercular family history or a personal history of some form of tuberculosis previous to the attack.

The Diagnosis of Enteric Fever.

Claude Ker (*Practitioner*, March, 1904) remarks that the insidious invasion of enteric fever and its tendency to resemble other diseases renders its diagnosis often a matter of difficulty. Short of the actual demonstration of the bacillus-typhosus in pure culture obtained from the patient, the diagnosis must depend on the presence in varying combinations of certain signs and symptoms, none of which are constant, and many of which are frequently absent. As regards the clinical diagnosis of the disease, he remarks that the symptoms ususally complained of fall naturally into two groups: firstly, general symptoms, pointing merely to fever and toxæmia; and, secondly, various local symptoms pointing to derangement of the alimentary canal. The classical symptoms of fever in general are present, and in addition we find other special symptoms, such as abdominal pain or uneasiness, constipation, or diarrhœa, epistaxis, and often a slight cough. The author thinks that sufficient stress is not laid on the importance of a slight cough or slight bronchial catarrh, and he states that in a case of continued pyrexia, in which no definite symptoms of enteric fever are present, but in which is found a slight degree of bronchitis, is very probably enteric fever. He regards the presence of so-called typical spots as finally clinching the diagnosis of enteric fever. Even atypical spots are often suggestive of this disease. Enlargement of the spleen, while always present, cannot be always determined by percussion, and it is enlarged in other disease which may be confounded with enteric fever. Short of the isolation of the typhoid bacillus, we have the diazo-reaction of Ehrlich, the information from blood counts, and the serum diagnosis, to aid in the diagnosis. The diazo-reaction is met with particularly in the early days of the fever; it is unusual for its appearance to be delayed beyond the sixth day; it is almost always present in the second week, and is only found wanting after the fourteenth day. He considers the chief value of this reaction to lie in its absence rather than in its presence, since it is undoubtedly present in other conditions than enteric fever. So that a case of continued fever, which at any time between the sixth and the twelfth days does not give this reaction, is in all probability not a case of enteric fever. As regards the blood counts, he states that in marked contra-distinction to most other infectious diseases, the leucocyte count is a low one. An average count in uncomplicated enteric fever would be 6000, and in severe cases an exacerbation of the disease may reduce the number considerably. Complicating conditions, which would of themselves be liable to raise the blood count, will, of course, raise the number. The value of a count in differential diagnosis, for instance from pneumonia, is therefore considerable. As regards the Widal reaction, he remarks that although it is not to be relied upon in the early days of the fever, it is wonderfully accurate in finally settling the nature of a doubtful case. He uses a dilution of 1 in 30, and, after seven years' experience, he regards the test as practically infallible, if it is employed with proper precautions, although it is frequently absent even in the second week of the fever He rightly (we think) considers that much of the distrust in the Widal reaction arises from the failure to get it in some of the more recently recognised colon or paracolon infections, since some of these cases appear almost indistinguishable from enteric fever. He sums up his opinion on the reaction as follows:—If a positive reaction be obtained, it means that the patient has at the moment, or has had, enteric fever; a negative reaction in the first fortnight means nothing; if still negative in the third week, there is strong presumption against a diagnosis of enteric; and if a negative reaction be still obtained after the third week is over, for all practical purposes the idea of enteric fever may be dismissed.

The After-History of Gastric Ulcer.

Russell (*Lancet*, January 30th, 1903) has collected the histories of several cases of gastric ulcer with a view to obtaining some definite information as to the ultimate ending of cases of gastric ulcer treated on medical lines —using the term "gastric ulcer" to include the various painful sequelæ as well as the actual continuance of the ulceration. He sought answers to the following questions: — (1) What proportion of cases of gastric ulcer treated medically, end ultimately in death apart from those which terminate fatally in the first attack? (2) What proportion end sooner or later in complete recovery? (3) What becomes of those cases which end neither in death from the complaint nor in complete recovery? (4) At what point of the case may medical treatment be considered as having failed, and what is the bearing of relapse on the question? During seven and a-half years covered by his enquiry, there were admitted to the medical wards of the hospital 89 women with hæmatemesis diagnosed as gastric ulcer. He succeeded in tracing the after history of 47 of these, and of 16 he succeeded in obtaining further particulars. In answer to his first question, as far as his information led him, he found that there was a mortality of about 2.1 per cent.; but he admits that this is probably under the mark. (1) It seems clear, however, that apart from the acute perforating attacks, gastric ulcer is not a frequent cause of death. (2) As regards recovery, 13, or 27.7 per cent., reported themselves as having had no return of their complaint; seven others, or 14.9 per cent., suffered from stomach symptoms of some severity or from definite relapses for periods after their first attack varying from a few months to six years, but had remained in good health when the last report was obtained for a sufficient length of time to justify their inclusion in the class of recoveries. (3) Three patients, or 6.4 per cent., have all suffered from stomach symptoms since their discharge, with periods of more or less complete immunity, but either the interval since the last attack has not been of sufficient length to afford ground for any definite conclusion as to the ultimate result, or the evidence of recovery given is unsatisfactory (4.) The remaining 21 patients, or 44.7 per cent., reported themselves as still suffering from their complaint. In the first seven cases there were repeated attacks of pain and vomiting, with or without hæmatemesis, but with intervals of comparitive immunity. The author considers it unwise to draw any definite conclusions as to the number of cases in the last group in which it would be advisable to recommend surgical interference. In all probability some of the patients will ultimately recover; in others the amount of suffering appears to be comparatively small. But, on the whole, the author considers the figures to afford justification for more frequent surgical interference in persistent cases of gastric ulcer, provided that the mortality of the operation can be kept at a really low figure, and that the results of operation can be shown to be comparatively good.

Black Urine.

Garrod (*Practitioner*, March, 1904) gives an interesting historical outline of the occurrence of this condition, and mentions that the occurrence of black urine was one of the earliest recorded facts in clinical medicine. At the present time we are more or less familiar with a number of conditions in which urine may, either when passed or after standing for a time, be so dark that, without abuse of terms, it may be styled "black." In the majority of instances such urines appear of a deep brown or red colour, when seen in thin layers, and black only in deeper layers; in only a few conditions, such as melanuria and alkaptonuria, is true blackness attained to, and in them only after exposure to air. Urine which is black, or which becomes black, may be excreted in a number of different conditions. In jaundice it is not common for urines containing bile pigment to approach blackness, but they may appear black when they contain biliverdin in considerable amount, together with bilirubin and other varieties of bile-pigment. Black urines of this kind are more common in cases of long-standing jaundice. It is probable that many of the black urines described by the earlier writers owed their colour to the admixture of blood or hæmoglobin, the blackness being merely an exaggeration of the smoky tint of acute nephritic urines. In paroxysmal hæmoglobinuria, and in cases of poisoning by such drugs as chlorate of potash and arseniuretted hydrogen, the urine may appear opaque and practically black, with an abundant chocolate deposit. In hæmatoporphyrinuria the colour of the urine usually resembles that of port wine, but every degree of tint is met with between a tawny pink and practical blackness. These differences are less due to the large quantities of hæmatoporphyrin present than to other dark abnormal pigments which are apt to accompany it. The great majority of cases of this class are due to the toxic action of sulphonal or its allies. True melanuria, associated with melanotic sarcoma, is a rare condition, since melanotic sarcoma is itself a rare disease. Melanuria only occurs when the internal viscera have become involved; the amount of melanogen excreted appears to be proportional to the degree to which the liver has been invaded, and to the quantity of pigment in the growths in that organ. In alkaptonuria the urine, as in melanuria, has a normal colour when freshly passed, but darkens, from the surface downwards, on standing, passing through various shades of brown to absolute blackness, this change in colour occurring much more rapidly when an alkali is added. One striking property of such urine is that of deeply staining any fabric which may be wetted with it. Urines very rich in indoxyl-sulphate often have a brown colour, which becomes intensified on standing. This colour is not due to the indigo-pigments, but to higher oxidation products of indol. Urines of this class blacken when warmed with nitric acid, but there is no such immediate blackening in the cold as with true melanuria. Any morbid condition which leads to abundant excretion of indican may give rise to this very dark urine. Hale White has found that in some cases of phthisis the urine remained acid even when kept for days or weeks in contact with the air, and sometimes became brown, or ultimately quite black, on long keeping. The nature of this dark pigmentation has not been definitely made out. The greenish-brown colour of the urine in carboluria which may amount to actual blackness on standing or in cases of carbolic-acid poisoning, is ascribed to hydroquinone, formed from phenol in its passage through the body. Other drugs, such as naphthalin, salol, creasote, and, in a less degree, the salicylates, cause darkening of the urine, which may attain to blackness. From this brief summary it is evident that a number of conditions may give rise to black urine, and one must differentiate them, since, from the point of view of prognosis, whereas the occurrence of true melanuria is an event of the worst omen, as indicating the recurrence of melanotic growths in the viscera, an equal degree of blackness is met with in alkaptonuria, which appears to be a perfectly harmless condition.

PATHOLOGY.

Some Unusual Forms of Malarial Parasites.

Mary Rowley (*Johns Hopkins Hospital Bulletin*, January, 1904), who has been working in the Clinico-Pathological Laboratory at the Massachusetts General Hospital, has observed in the blood of three cases of aestivo autumnal malaria a number of parasites which differed from the ordinary ring-shaped bodies, and the crescents and ovoids. The first set of bodies she describes are intracellular, elongated, and sausage-shaped, extending transversely across the red cell nearly from side to side. The body of the parasite contains irregular openings, usually situated at its extremities. The chromatin is in the form of dots, arranged in a short series parallel to the long axis of the parasite, and about midway between its extremities. Pigment was present in all the forms observed, and was either scattered about the parasite without special arrangement, or grouped at its ends. The other forms found would suggest a transition between the bodies just described and " crescents " ; for example, one is distinctly curved on itself, like a crescent, but of much looser structure, the chromatin arranged in a string of dots near one end and the pigment at the periphery, and not at the centre, as in most crescents. In other forms, although the crescentic form is shown, much more of the corpuscle is to be seen than normally, and the form approaches in appearance that presented by the one just described. The author considers that these forms suggest a means of formation of " crescents " out of the elongated intracellular forms above described, while these in turn can probably be connected (through intermediate forms) with larger and heavier forms of ring bodies.

Placental and Congenital Tuberculosis.

Warthin and Cowie (*Journal of Infectious Diseases*, January, 1904), in an interesting paper on the casuistry of placental and congenital tuberculosis, report a case of miliary tuberculosis of the mother in the seventh month of pregnancy, tuberculosis of the placenta; agglutination thrombi, containing many tubercle bacilli, in the placenta and fœtus. Then they give a brief summary of all recorded cases of a similar nature, give a complete account of the autopsy in their own case, with a critical study of the histological appearances, and then draw the following conclusions:—(1) In the case of the entrance of tubercle bacilli or other micro-organisms into the maternal blood during pregnancy, the conditions of the circulation in the placental and uterine sinuses favour their collection there. (2) If the bacilli are capable of multiplication, the first step in the development of tuberculosis of the placenta appears to be an agglutination and coagulation thrombosis of the maternal blood in the intervillous spaces. The formation of such thrombi around the multiplying bacilli may to some degree be protective in inhibiting or restricting the growth. (3) The syncytium appears to possess a certain degree of resistance against tubercle bacilli, the tuberculous thrombi in many cases being attached to an apparently normal syncytium, and occasionally the latter may even be found extending over the thrombus. (4) The question of the passage of tubercle bacilli through an apparently normal syncytium still remains open. (5) In the case of destruction of the syncytial covering, the stroma of the chorionic villi may become involved in a tuberculous process either directly or by an extension from a tuberculous thrombus. The syncytium of the normal placenta is not intact throughout, processes of decay and growth occurring in the chorionic villi from the earliest stages of pregnancy. In the later months the placenta is a *senile* organ, presenting in many places an atrophic or necrotic syncytium (infarcts), and through such damaged areas a passage of micro-organisms may take place. The deposit of fibrin found so frequently over such damaged areas may exert a protective action against such passage. 6. Tubercle bacilli may be found free in the reticular spaces and blood vessels of the chorionic villi without the occurrence of histological changes of tuberculosis. (7) The fœtal blood may contain great numbers of tubercle bacilli without other changes than small agglutination thrombi being present in the fœtus. Inoculation shows these bacilli to retain their virulence. From this it way be assumed that the fœtal tissues are relatively immune to the action of the tubercle bacillus. (8) Granting such immunity, it is possible that living tubercle bacilli may be present in the fœtus and newborn child without exciting histological changes, and, developing some time after birth, may then give rise to characteristic tuberculous lesions. A true latent congenital tuberculosis, therefore, is both possible and probable; but additional investigations are necessary to settle the question of the frequency of such an event. The commonly accepted dicta regarding congenital tuberculosis are probably extreme. It is not at all unlikely that it is of much more common occurrence than is generally supposed.

PÆDIATRICS.

The Modification of Cow's Milk for Infant Feeding.

Geo. F. Still (*Clinical Journal*, Nov. 25th, 1903 and abstracted in the *Medical Review*). Some infants cannot take cow's milk, however modified, but the vast majority thrive on it. On such modifications of milk as diluting it once, twice, or thrice, and throwing in a little sugar, vigorous infants may thrive; but many failures, even with healthy infants, will occur, and many more with weakly infants, and those whose digestion has already been impaired by disease or unsuitable diet. The difficulty in digesting cow's milk lies in the large proportion of casein which must be overcome without reducing the other important constituents to a harmful degree, or making the food too rich in them. The following table shows the average composition of human and cow's milk:—

Human Milk.—Proteid, 2 per cent.: casein, .6 per cent.; lactalbumin, 1.4 per cent. Fat, 3. 5 per cent.; sugar, 7 per cent.

Cow's Milk.—Proteid, 4 per cent.: casein, 3.25 per cent.; lactalbumin, .75 per cent. Fat, 3.5 per cent.; sugar, 4 per cent.

Even the youngest infants have some range of accommodation in digestion. Many can digest a larger proportion of casein than that in mother's milk; but a large proportion of the failures with cow's milk are due to insufficient dilution. For an infant two or three week's old, a mixture of one part of cow's milk and two parts water is often ordered. This mixture differs widely from human milk. Thus:—

Cow's Milk and Water, 1 in 3.—Proteid, 1.3 per cent.: casein, 1.08 per cent.; lactalbumin, .25 per cent. Fat, 1.16 per cent.; sugar, 1.3 per cent.

The casein is still nearly double the proportion in human milk. Even if three parts of water are used with one of milk, there is still a slight excess of casein. To reduce the curd forming proteid to the proportion of human milk, four parts of diluent must be added. Thus:—

Cow's Milk and Water, 1 in 5.—Proteid, .8 per cent.: Casein, .65 per cent.; lactalbumin, .15 per cent. Fat, .7 per cent.; sugar, .8 per cent.

But milk is seldom diluted to this extent. Yet it is considered evidence of some peculiar weakness in digestion if an infant suffers from gastro-intestinal disorders, and fails to thrive when, say, at eight weeks it is fed on a mixture of one part milk and two parts water. The wonder is that so many infants manage to digest their food in spite of the excess of curd. Even at five or six months some infants cannot digest a mixture of cow's milk and water in equal parts. Though it is the proportion of casein, not of total proteids, which has to be corrected by dilution, the resulting total of casein plus lactalbumin should not be far below that of human milk. Determine first the degree of dilution solely with reference to the proportion of casein which the infant can digest, and then rectify as far as possible the deficiency of lactalbumin, fat and sugar.

The Fat Deficiency.—When four parts of water are added to one part milk to correct the proportion of casein, the percentage of fat is reduced from 3.5 to .7. A low percentage of fat, *e.g.*, 2 per cent., is one of the commonest causes of rickets. In the absence of cream containing a known percentage of fat, there are several ways of surmounting the difficulty. "Top milk," which is the upper portion of milk allowed to stand till the cream has risen, may be used for dilution. It has the advantage of containing the additional fat which has risen to the top, while the proportion of proteid is scarcely altered. Average London milk which stood three hours gave the following results:—

Quantity of top milk taken from each quart of milk.	Proportion of fat per cent.
20 oz.	5.5
15 „	6.5
10 „	8.0
5 „	11.0

But such a method is unsatisfactory, because the percentage of fat is subject to considerable variation. Simple gravity cream, *i.e.*, cream taken from milk allowed to stand 15 to 17 hours, contains as a rule about 24 per cent. of fat. Such cream is undesirable, because of the danger of bacterial and chemical contamination. Far better is "centrifugal cream." The cream is separated in a few minutes, and shows only slight variations in strength. The average fat percentage of 23 samples bought from various shops in London was 4.6 The proper amount to be added to any milk mixture is a simple matter of calculation, *e.g.*, a mixture of one part milk with three of water contains .8 per cent. of fat; if to 2½oz. of such a mixture 1 drachm of cream be added, a dilution of 1-20 is obtained, *i.e.*, 2.3 per cent. fat, the total percentage of fat being 3.1, which is abont what is wanted. A further advantage is the small quantity to be added, so that all the other constituents except the fat may be ignored.

The Sugar Deficiency.—No exact percentage is necessary, but still 6 or 7 per cent. is the proportion normally present in human milk. A level teaspoonful (using a rather large domestic teaspoon) of milk sugar in 3 oz. of fluid gives a solution] of 1-20; similarly a lump of ordinary white cane-sugar, ½ in. square, in 3 oz. of fluid gives a 5 per cent. solution. With any ordinary milk mixture, the addition of 5 per cent. will give a total percentage near enough for all practical purposes. The choice between cane-sugar and milk-sugar is not one of great importance, but the author prefers the latter if it can be obtained.

The Albumin Deficiency.—The obvious defect is the low proportion of lactalbumin, a defect present to some extent in cow's milk before dilution. There is one ideal diluent—whey. Whey contains all the original constituents of milk except casein, and most of the fat (a varying proportion of the fat, but rarely more than 1 per cent.. is retained if the curd is thoroughly broken up before straining). Whey contains practically the same proportion of lactalbumin, salts and sugar as was originally present in milk. In milk diluted with three times as much whey, making a milk mixture of 1 in 4, the percentage of lactalbumin would be .75, instead of .18, if water were the diluent. Such a mixture would contain .81 per cent. casein, and raising the total proteids to 1.56 per cent. The preparation of whey requires care. The rennet must be destroyed by heat before the whey is used as a diluent, otherwise the ferment will curdle the milk to which the whey is added; but if a temperature above 160° is used, the lactalbumin is coagulated. To avoid this a temperature of 150° to 155° may be used, which destroys the ferment, but does not coagulate the lactalbumin. This is desirable, but not necessary; the change in the lactalbumin, which results from heating to boiling point, seems to interfere little, if at all, with its digestibility. If whey is used, the percentage of sugar in the milk is not reduced; therefore it is only necessary to add enough sugar to raise the percentage from 4 to 7. The fat in the whey must also be considered. If the whey has been made without breaking up the curd, the fat present only amounts to .2 or .5 per cent., and may be ignored. But as some breaking up of the curd has usually taken place before the whey is strained off, it is generally more accurate to assume that the whey contains 1 per cent. fat. Thus the following mixture yields this result:—

Mixture.	Percentage.
Milk, 6 drachms	Casein, .81 per cent.
Whey, 18 „	Lactalbumin, 75 per cent.
Cream (with 48% fat), 1 drachm	Fat, 3.87 per c.
Milk-sugar, ½ level teaspoonful	Sugar, 6.5 per cent

This mixture approximates more closely to human milk in respect of lactalbumin than is possible with any other diluent. The preparation of whey entails trouble, but that is not sufficient to prevent hospital out-patients using it even for several months. If whey cannot be obtained, barley water has some advantages over plain water. Human milk varies not only with the health of the mother and her diet. but even with the time of day, and with the portion of milk taken. Rigidly fixed percentages are not only unnatural, but unnecessary. A practitioner with a knowledge of the average composition of milk, cream, and whey (or still better, of the particular milk and cream used) can regulate the proteids, fat and sugar with sufficient accuracy for all practical purposes.

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CORRESPONDENCE.

London.

(FROM OUR OWN CORRESPONDENT.)

"*The Gold Coast and Ashanti in* 1903"—*The Public Health during* 1903—*The London Hospitals—The University of Edinburgh—A Diploma in Tropical Medicine—The Information Bureau of the University of Paris.*

An address under the above title was recently delivered at Liverpool by Dr. C. S. Patterson, lately in the employment of the Gold Coast Government Railways. Dr. Patterson, in the course of his remarks, said that enormous progress had within recent times been made in opening up the interior of the Gold Coast Colony, and that, if only reasonable precautions were observed, no white man need fear undertaking duty in that part of the world, despite its unenviable hygienic notoriety. Blackwater fever was one of the important deadly enemies to be encountered, but there was no reason why it should be contracted if care were taken to live in the duly appointed white quarters and to sleep in beds fitted with properly adjusted mosquito curtains, which had been carefully tucked in round the mattress before nightfall. Frequent and long leave of absence was, however, necessary, in order to maintain physical vigour and preserve the power of resistance against disease. In the municipality of Sekondi, those in local authority did not believe in the mosquito theory of malaria. It was therefore an imperative necessity that a medical officer of health should be appointed to that district, invested with powers to enforce the legitimate carrying out of preventive measures in accordance with the present day views concerning malarial etiology. Dr. Patterson prophesied that such an officer would be able, within six months, to reduce the existing percentage of fever cases by at least one half.

The unpleasant weather and the excessive rains of 1903 have not proved altogether unhealthy, and, so far as is shown by the death rate, the year was about the most healthy experienced for a long time past. Both the mild winter and the cool summer were exceptionally favourable to a low death rate, the former being particularly advantageous to the aged and to a marked absence of diseases of the respiratory system, whilst the absence of heat in summer caused comparatively few deaths from diarrhœa and dysentery. In London, with a population of more than four millions and a half, there were in all 72,082 deaths during the 12 months, closing the year with the Saturday after Christmas. This number is 15,020 fewer than the average of the last 10 years, and is 8960 fewer than in 1892, which was also a healthy year. It is 16,132 fewer than in 1899, when the population was considerably less. In the last six years there have been 38,590 fewer deaths than the average—a fact probably very intimately associated with the mild winters of recent years. The average death rate for the year for every 1000 living was 15.6, while in 1902 it was 17.8; in 1901, 17.4; in 1900, 19.2; and in 1899, 19.5. There was not a single week during the year with the death rate in excess of the average—a feature which has certainly not occurred in recent years. The first quarter of the year had the largest number of deaths, there being in London 20,393, which, however, was 4391 fewer than the average of the last 10 years, but the death rate per 1000, 17.7, was far higher than in any other period of the year. The largest number of deaths occurred in the week ending January 24th, when the total was 1848, which was only 25 less than the average. There were in the quarter 652 deaths from measles, 761 from whooping-cough, and 4013 from diseases of the respiratory system. In the second quarter there were 17,054 deaths, which is 3091 fewer than the average, and the death rate per 1000 was 14.8. The period was healthy throughout, there being no week with fewer than 132 deaths below the average, whilst in several weeks the deficiency exceeded 3000. There were during the quarter 794 deaths from measles, 479 from whooping-cough, and 2747 from diseases of the respiratory system. The deaths from diarrhœa and dysentery were 266, being precisely similar to the number from the same cause during the first quarter of the year. For the third quarter the number of deaths amounted to 16,175, which is 4884 fewer than the average, and the rate per 1000 was 14.0, which is lower than any other quarter. For each of the weeks ending August 1st and August 8th there were over 600 fewer deaths than usual, the number in the last-mentioned week being 685. During the quarter there were 276 deaths from measles, 230 from whooping-cough, 1615 from diarrhœa and dysentery, and precisely the same number, 1615, from diseases of the respiratory system. The fourth quarter had 18,460 deaths, which is 2654 fewer than the average and the death rate per 1000 was 16.0. The number of deaths fewer than the average exceeded 100 in each week throughout the period, and in the closing week, ending December 26th, was 553. There were in the last quarter 327 deaths from measles, 187 from whooping-cough, 804 from diarrhœa and dysentery, and 1875 from diseases of the respiratory system. For the 76 great towns, with an aggregate population of more than 15,000,000 in the middle of 1903, the death rate for the year was 16.2 for every 1000 persons living, which is 0.6 higher than the rate for the year in London. The rate for the respective quarters in the urban districts were 17.6, 15.4, 15.0, and 16.9 against 17.7, 14.8, 14.0, and 16.0 in London. The highest death rate for the aggregate urban districts was 20.1 for the week ending January 24th, which was also the most unhealthy week of the year in London, where the rate was 20.9. The lowest death rate in the urban districts was 13.4 for the week ending July 25th, and this was the week with the second lowest death rate in London, the rate being 12.7, which was only beaten by 12.4 for the week ending June 13th. There were only seven weeks during the whole year with a higher death rate in London than in the 76 great towns, and not a single week since that ending April 18th. Hornsey again stands very high on the Registrar-General's returns with regard to health. It was the most healthy of all the 76 great towns in 1902, and it maintains that position again in 1903. Handsworth stands the second on the list for health in the first and third quarters, and Walthamstow holds that position in the second quarter. Wigan has the highest death rate of all the 76 great towns in the first quarter, whilst it stands second on the list in the second quarter and fourth in the third quarter. Middlesborough is the most unhealthy in the second and third quarters. Although, without doubt, the very healthy year is intimately associated with the weather which prevailed, there are probably few who would wish for similar weather during the year on which we have now entered.

In the year 1901 the London hospitals had an ordinary income, including legacies, of £904,930, and their ordinary expenditure was £785,285, which left a surplus of about £120,000. The extraordinary expenditure amounted to £218,860, towards which special donations amounting to £197,178 were given, so that on the year the hospitals collectively had a surplus revenue from all sources of nearly £100,000 (£97,962), against which must be charged any special commitments for building purposes for works in progress but not completed and paid for. The corresponding figures for the year 1902 are not yet available, but the Hospital Sunday Fund returns show that during the 12 months ended December 31st, 1902, the voluntary hospitals and medical charities of London, including convalescent homes and dispensaries, relieved over 1,775,000 patients at a cost of £1,161,133. The ordinary income of these charities amounted to £867,569, and legacies yielded £290,554, making a total revenue of £1,158,123, showing a net deficiency of only £3010. "These figures," says the *Hospital*, "confirm the view that providing the public will contribute during the next 10 years some million and a half pounds for building and reconstruction purposes, so as to modernise the whole of the London hospitals and bring them up to date, these institutions will be placed once and for all upon a sound financial basis upon the voluntary system. The one paramount necessity of the moment is the enforcement of economy in regard to the expenditure of our hospitals in London and elsewhere. The great changes brought about by Lord Lister's discoveries and the introduction of trained nurses and modern methods of treatment have led the authorities into large expenditure, which in the first stages of these developments, owing to a natural desire not to cripple efficiency, has been too prodigal in many directions. The administration of every hospital should be under the direct personal supervision of a resident medical superintendent of the highest capacity, whose duty it should be to exercise control over every item of expenditure in every department as well as to look after the general administration of the whole hospital. Under such a system it should be possible to reduce the present expenditure by from £10 to £20 per bed. Seeing that there are upwards of 8500 beds in the London hospitals, the resources of the hospitals might in this way be increased by from £85,000 to £170,000 a year, and the calls upon the public for subscriptions each year would, of course, be correspondingly decreased too."

The annual report of the University of Edinburgh states that during the past year the total number of matriculated students (including 300 women) was 2990—the highest number reached for 10 years. Of this number, 873 (including 263 women) were enrolled in the Faculty of Arts, 238 (including 6 women) in the Faculty of Science, 50 in the Faculty of Divinity, 352 in the Faculty of Law, 1451 (including 14 women) in the Faculty of Medicine, and 26 (including 17 women) in the Faculty of Music. Of the students of medicine, 677, or over 46 per cent., belonged to Scotland; 333, or nearly 23 per cent., were from England and Wales; 118 from Ireland; 72 from India; 232, or about 16 per cent., from the British colonies; and 19 from foreign countries. Besides these matriculated students, 70 non-matriculated students have paid the 5s entrance fee, 37 of whom were women, chiefly attending music classes. The number of women attending extra-academical lectures, with a view to graduation in medicine in the University, was 101. The total annual value of the University fellowships, scholarships, bursaries, and prizes now amounts to about £18,150, viz., in the Faculty of Arts, £10,600; in the Faculty of Science, £1500; in the Faculty of Divinity, £1680; in the Faculty of Law, £540; in the Faculty of Medicine, £3630; and in the Faculty of Music, £120. In addition to the above, a sum of upwards of £600, being the income of the Earl of Moray Endowment Fund, is annually available for the encouragement of original research. Although the Carnegie Foundation has not as yet had an appreciable influence in increasing the aggregate number of students, the number of those availing themselves of that section of the scheme which provides for payment of class fees has during 1903 been higher than formerly, and it is noticeable that many of these students take out a larger number of classes than they would probably otherwise have done. Of those who have been appointed to Carnegie post-gaduate fellowships and scholarships, and who have received grants in aid for research, a considerable proportion are graduates of the University of Edinburgh. In accordance with the scheme of allocation intimated in 1902, grants have been made in augmentation of the salaries of several of the University lecturers, and a sum of over £7000 is available for improvements in the library, in addition to an annual grant of £1000 for the purchase of books. The movement for the abolition of the junior classes, which began last year with the discontinuance of the junior class in Greek, has now been extended to the junior classes in Latin and mathematics. It has long been felt that the instruction given in these classes fell below the standard proper to the University, and recent improvement in secondary education throughout the country has lessened the need and the demand for such classes. As a practical corollary may be mentioned the discontinuance of the examination in English and Lower Latin, Greek and mathematics, hitherto applicable to candidates for certain bursaries.

In view of the fact that all medical men whose fees are paid by Colonial Governments must nowadays, before proceeding to their appontments, attend a course of instruction and obtain a certificate of proficiency in tropical diseases, it has become desirable that an examination should be instituted which will establish a satisfactory and uniform standard of efficiency. The University of Cambridge has had for some months under its consideration a scheme for the establishment of a special diploma in tropical medicine, and has now, with commendable promptitude and with the full approval of those in authority, promulgated a set of regulations for conducting examinations to meet the requirements of the Colonial Office. An examination will be held once a year, and any person whose name is on the medical register will, on payment of a fee of six guineas, be admissible as a candidate, if a period of not less than one year has elapsed since his attainment of a registrable qualification. The examination will comprise the following subjects:—(1) The methods of pathological and bacteriological investigation. The examination of the blood. The characters, diagnosis and life history of animal and vegetable parasites. The examination, chemical and microscopic, of poisonous or contaminated foods and waters. (2). The origin, pathology, propagation, distribution, prevention, symptoms, diagnosis and treatment of the epidemic, endemic, and other diseases of tropical climates, including malaria; black-water fever; trypanosomiasis; relapsing fever; dengue; yellow fever, plague, tetanus, beri-beri, dysentery and hepatic abscess, cholera, enteric fever, Malta fever, and specific diarrhœal affections of the tropics; diseases due to cestode and other worms; filiariasis, bilharzial disease, specific boils, sores and other cutaneous affections, mycetoma, ophthalmic affections of the tropics; affections caused by poisonous plants and animals and by poisoned weapons; sunstroke. (3) The general effect on health in the tropics of seasons and climate, soil, water, and food. Personal hygiene, acclimatisation. Principles of general hygiene, with special reference to food and water supplies, sites, dwellings, drainage, and the disposal of refuse. The sanitation of native quarters, camps, plantations, factories, hospitals, asylums, gaols, pilgrim and coolie ships. Principles and methods of disinfection.

In August of 1903 an Information Bureau in connection with the University was founded in Paris, and its official inauguration took place with due ceremony in February of this year. The Bureau is situated in the Palace of the Sorbonne, and is connected with the telephone exchange. It undertakes to give every information which may be required by those seeking opportunities for study in the French capital. French, English, German, Spanish and Russian are spoken. The information is so classified that all books and documents referring to lectures or demonstrations connected with any special subject of study can at once be found; and full particulars can be given as to the hours of opening and closing of museums and libraries, the conditions governing admission, etc. A large map of Paris is available for the guidance of those who do not know their way about. Dr. Blondel, the general secretary of the International Association of the Medical Press, is the managing director. The advantages which this institution will offer to the large number of strangers who constantly visit Paris for the purpose of scientific enlightenment are enormous, both from the point of view of convenience and economy of time and trouble. Hitherto the multiplicity of places for obtaining information and their distance from one another has often proved an almost insuperable barrier to the accomplishment of work on any special subject; but all such hindrances are now removed, and there will no longer be any difficulty, even for those who have little or no knowledge of the language, in being rapidly put in touch with the numerous sources of educational knowledge which the city possesses.

Victoria.

(FROM OUR OWN CORRESPONDENT.)

Lodges and Lodge Surgeons—Abuse of Hospitals.

As usual, the all absorbing topic amongst general practitioners is the lodge question, and whenever any of the daily journals are hard up for some matter of interest, this subject is worth a great deal to them. Lately the *Argus* appeared with nearly a column expressing the opinions of some lodge doctors and of high officials from amongst the lodges—all, of course, adverse to the medico, accusing him of receiving more than he deserves already. Facts and figures are twisted so that the lodges' case would appear to the outside public to be everything that is fair and right. According to their views, not one quarter of the lodge members receive attention during the year; therefore, the lodge surgeon receives payment quite out of proportion to what he deserves. Numerous lodge patients are also credited with paying extras to the lodge doctor, and the wealthy member of the lodge is also quoted, for he never thinks of claiming lodge benefits; but, as we know, is not above sending for the lodge doctor to attend his wife and family, expecting far more attendance than the genuinely poor lodge member. This last person, viz., the well-to-do member, usually joins numerous lodges, his idea being to ingratiate himself with the various members, and with the help of some such organisation as the A.N.A. make use of his connection with the lodges as a fulcrum to political eminence. From this position he fulminates his wrath against the humble lodge doctor for daring to try and emerge from his degradation, and also declares to an admiring circle of adherents how he has always refused to claim the benefits of his lodge. As a result of this *Argus* article, numerous correspondents write to the editor detailing their grievances, and one comes out with a tirade against the doctors' fees, and puts forward a proposal. He says: "Take a district or suburb, and obtain 500 or more subscribers at £2 2s per annum, and engage a doctor at £550 per annum, the association to provide nurses, so that the subscribers would have to pay for medicine only." He starts by declaring the doctors' fee to be £1 1s per visit, and as this is a fabrication, it is hardly worth while to trouble about him; but it is such as this man who adds his quotum of venom to strike down the general practitioner. The usual fees in the suburbs of Melbourne are 7s 6d to 10s 6d per visit; only specialists and leading members of the profession living in Collins-street charge £1 1s; and this correspondent evidently wants the best of attendance for the smallest sum, for I am sure he never had to pay £1 1s a visit for any general practitioner living in the suburbs of Melbourne. An "M.D. Rusticus" writes a letter which no doubt expresses his views, and which indicate the difficulty of legislating for a profession of which such as he is a member. He first states that he has never met with a wealthy member of a lodge that did not use all the benefits of the lodge, and that he speaks from 16 years' experience. Then he goes on to say that "all his sympathies are with the lodges, just because the country doctors' pay, 'such as it is,' is sure, and the lodge gives him a nice little monopoly—for the fact of his holding all the best paying portion of the community in lodges goes a long way towards keeping an opposition practitioner out of his district." He forgets in this statement that he is pauperising his profession by attending to the best paying portion of the community as lodge patients, and he also does not profit by the experience of other country practitioners, viz., that his lodge, on the first chance of opposition, will ask him to reduce his fees, and if he does not do so they will hand over his monopoly to some one who will undercut him. He also villifies the Medical Defence Association in stating that it puts restrictions upon its members and affords no protection whatever against "blacklegs." Now, this is one of the principal objects of the Medical Defence Association, and they are, and have been, doing their best to stop this very practice "M.D. Rusticus" complains of. The apathy displayed by the general practitioner—town and country—towards the amelioration of his own interests is deplorable. If he would only join some association such as the Medical Defence, very soon all "blacklegs" would occupy their proper position, and the profession, as a whole, would be greatly benefited socially as well as financially, and the public generally would gain in every way.

Dr. J. W. Barrett has also been stirring things up by calling attention to the pauperisation of the community by means of the present system adopted by the general hospitals. Another writer states "that the inmates of hospitals are of two classes—first, those in private institutions, who pay fees which are not, perhaps, high for the accommodation provided; but are above the means of any but the wealthy; second, those in the public hospitals, who, as a rule, pay nothing at all." Paying wards in public institutions are another method of sweating the profession. Either a public hospital is for those who are poor, and are unable to pay, or it is not. If paying wards are instituted, they will be highly detrimental to the profession, for is it not taking money out of the pockets of the profession? There is no doubt a cheaper system of private hospitals could be devised and worked out for the benefit of the middle classes and the profession also. Again, many cases go in to the general hospitals whose means are ample, and who are quite able to pay for outside medical attendance. Every medical man could give dozens of cases from his own knowledge which have gone to general hospitals for operation and attendance, and they could well afford to pay for outside treatment. The out-patient wards of all the hospitals are filled with patients whose financial positions are often better than those who are attending them for nothing. The number of people receiving hospital attendance during 1902-3 in and about Melbourne, according to Dr. J. W. Barrett, was 76,000—12,000 in-patients, and 64,000 out-patients. Deducting 10 per cent. for country cases and those who travel from one hospital to the other would make it roughly 65,000. The population of Greater Melbourne is estimated by the Government Statist at 500,000. We therefore find that one person in every 7½ has been receiving hospital assistance. The Inspector of Charities gives the total number of persons in receipt of charity as 135,000, which, in a population of 12,000,000 is nearly 1 in 9, this exclusive of old age pensions and of non-subsidised charities. Dr. Barrett therefore, rightly concludes that the charitable system has broken down and has been grossly abused.

Queensland.

(FROM OUR OWN CORRESPONDENT.)

Lead Poisoning—Notification of Phthisis—The Brisbane Hospital—Nurses as Barrackers.

THE most interesting event of recent occurrence is the discovery, by Dr. J. Lockhart Gibson, of the cause of lead-poisoning in children in Queensland by the transference of paint from the walls and verandahs of houses to the fingers, and from the fingers to the mouths of the patients. The paper which Dr. Gibson read upon the subject was most interesting, and the arguments brought forward convincing, the wonder being that so simple a solution has not been accepted before. The cause being ascertained, and there was practically an unanimous agreement by members of the Queensland Branch as to the correctness of Dr. Gibson's views, there should be less difficulty in preventing the disease and in combating it when it occurs. One member, Dr. Kerr Scott, mentioned that the basis of house paint in India was zinc, and it would be well to investigate the question of the adoption of a similar plan in Queensland, since it must be acknowledged that the dangers from zinc are slight compared with those of lead. Any member of the profession whose eye is caught by these lines should not fail to read Dr. Gibson's paper (published in the April issue of the *Australasian Medical Gazette*) and the discussion, lead by Dr. Turner, which ensued, if he has not done so already.

There was not an equal unanimity among members of the Branch with regard to the desirability of the compulsory notification of phthisis, though when the question was put to the meeting, few were found to vote against it. A deputation, putting forward the views of the Branch, waited upon Dr. Ham, the Commissioner of Public Health, and were pleased to find that he was in accord with them, and are more pleased to learn that the notification of phthisis is to be made compulsory, and the examination of suspected sputum to be performed *gratis*. These are distinct advances, and the fact that a few will be harassed by the enactment will be compensated for by the great advantage which will accrue to the many.

The Brisbane Hospital committee have been happy in their selection of medical men to fill the new offices, and considerable advantage should result to the patients. Dr. Nield has been appointed assistant gynæcologist, Drs. Meek, McLean, and Salter, assistant surgeons, and Drs. Clatworthy and Halford assistant physicians. The appointments are published in that order, but one presumes that Dr. Halford will be given seniority to Dr. Clatworthy. The committee now have under consideration the appointment of men to the special departments of the throat, nose, and ear, and should have little difficulty in making a choice. There were no applications for the position of honorary anæsthetist, possibly for some such reason as was foreshadowed in a former letter. The issue by the committee of the Brisbane Hospital *Monthly Chronicle* should help to keep the needs of the hospital before the subscribers, if not before the non-subscribers. The editor of the *Chronicle* has been happy in his selection of material, but it would be as well if in future issues the gratuitous advertisements given to the members of the honorary staff were omitted. The question of the support of the hospital is still occupying the minds of the people, the overdraft having reached the substantial sum of £6700. Efforts of different kinds are being made to raise funds, but all attempts appear to be inadequate, and some form of general taxation will probably be required if the hospital is to be maintained at its present degree of efficiency. The already overburdened ratepayers are fervently praying that they may not be made to bear any more, for their backs are breaking.

A custom which exists in Brisbane among a certain class of nurses to "barrack" for a particular doctor is one that should be discouraged by the profession. It is, of course, very nice to feel that a nurse prefers oneself to all others; but it is not fair that she should go about saying so among the patients of other medical men. Some months ago your correspondent was engaged to attend a lady in her second confinement. He had been in fairly constant attendance upon the family since the birth of the first child, at which the lady had been attended by another medical man. When being engaged, your correspondent asked the usual question about a nurse, and the lady replied that she would like to get the one who was in attendance at her first confinement. A few days later the husband of the expectant mother called upon your correspondent and said that the nurse refused to accept service unless the former doctor were engaged, because had any other doctor been at the confinement the mother's life could not have been saved! The choice was left to the husband between your correspondent and the nurse, and the nurse won. Hence these tears. This is, of course, merely an instance brought prominently before one's own notice of a custom which is allowed to prevail. One is inclined to tolerate and by silence to encourage it where it flatters one's one vanity; but where it is to the advantage of the other man it rouses one's opposition. In any circumstances it is not fair competition.

A MIDWIFERY NURSES' ACT.

(*To the Editor of the Australasian Medical Gazette*).

Sir,—The Australasian Trained Nurses' Association, by maintaining a standard of efficiency, has dealt a blow to the school of Gamp, whose demerits have been feelingly described in your pages by Dr. Binney, and whose neophytes will continue to crowd into practice until they can be checkmated by the provisions of a Registration Act.

The Council of our local Branch of the B.M.A., in a recent manifesto, has formulated four propositions embodying a subtle argument concerning registration. The first pair deals with a special offence which calls for special means of prevention apart from registration, *i.e.* :—

"1. The fact that all members of the medical profession are registered under an Act of Parliament has not prevented certain members from carrying on the practice of abortion to a notorious extent.

"2. The registration of midwifery nurses under a similar Act, instead of acting as a deterrent, would, in the opinion of the Council, by making them independent practitioners, give them greater opportunities of performing improper or illegal operations."

Misconduct by individuals—a side issue—does not affect the expediency of the Medical Registration Act for protection of the public against unqualified pretenders—protection which is no less desirable against the Gamp school. The Council's opinion, that the registration of nurses would afford greater opportunities for misconduct, can hardly be sustained without insinuating that similar influence is exercised by medical registration. It would seem more reasonable to assume that individual misconduct will occur in despite, not because of, registration, which by imposing responsibility does constitute a deterrent, albeit insufficient, and assists to pillory offenders who can be satisfactorily identified by it alone.

Opportunities for misconduct cannot be greater than they are now. Numerous members of the untrained sisterhood are actually established as independent practitioners, popular in their neighbourhoods, potent for evil. The State has no overt means of distinguishing them from other citizens.

In the third proposition, the Council, by implication, admits the utility of registration (notwithstanding the objections advanced in Nos. 2 and 3), but prefers the imperfect agency of a voluntary association to the compulsory thoroughness of a legislative Act.

"3. All advantages that could be hoped for from an Act of Parliament are already attained by means of the registration of midwifery nurses by the Australasian Trained Nurses' Association."

The ranks of this are recruited by attractions like those of other voluntary associations; but the main advantage of membership consists in the moral support of the medical profession, which is not so valuable as it might be. Not all eligible nurses have found it to be to their interest to join. Enlightened patients may demand the service of a trained nurse; but others (a majority) engage nurses without reference to training. Often the nurse recommends the doctor, instead of the doctor recommending the nurse. The influence of the Association does not yet permeate the social strata which give most employment. We must leave its development to time, when, I trust, it will attain in relation to nurses the position which the B.M.A. occupies in relation to medical practitioners.

In a case of misconduct, few persons would become aware of an expulsion from the ranks of A.T.N.A., but erasure from State registration would be a public stigma.

Can the assertion made in proposition 3 be substantiated ? Can the public advantage from incomplete registration by an association be equivalent to that derived from complete registration by the State ?

"4. In the opinion of the Council the most effective means of preventing abortion-procuring is the licensing, registration, and inspection of all private hospitals and lying-in homes, and houses where patients are admitted for any kind of medical or surgical treatment."

The suggestion is well intended ; but an inquisition so comprehensive will startle every family that has taken charge of a sick or injured relative. Its application ought to be limited, the proviso—for payment or for purposes of profit—being understood. In any case, it would seem even more essential to register the occupier whose habitat might be frequently changed than to license and register the house.

Every effort to reach the target should be aimed at the bull's-eye—registration of the nurse.

The manifesto reviews one aspect — abortion-mongering ; but its title, *Report of an Inquiry into the Question of a Midwifery Nurses' Act*, invites criticism of the argument.—Yours, etc.,

WALTER SPENCER.

Enmore, April 28th, 1904.

THE WOMEN'S HOSPITAL, SYDNEY.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—Replying to left-handed queries and sly insinuations is an unprofitable task at the best. Yet it is sometimes expedient. Perhaps it may be so in the case of a letter in your April number, over the signature of W. H. Crago. That gentleman has something to say on the last annual report of the Women's Hospital, referring chiefly to the management, but in part also to the medical statistics of the institution. Having some concern with the latter, I will write a few lines. The doctor wants to know if Matthews Duncan's "four-week" period has been kept in view in estimating the puerperal mortality. The question is not very lucid, but presumably it means that this period is the only, or the best, basis for the calculation of the death rate. I may say at once that no defined limit, as far as I know, has been generally observed in such work, or even adhered to by Duncan himself. This is pretty clearly shown in his work on the mortality of childbed. He defines "the mortality in childbed" as being, for statistical purposes, any influence producing a fatal result within a period of "*four* to *six* weeks, or *any other time that may be agreed upon.*" Which illustrates Matthews Duncan's common sense. The term represents, thus, not a fixed quantity. Dr. Crago's ideas may be different, but here is a greater than Crago, and he means and actually says, *for statistical research, take "any time agreed upon."*

Now, at the Women's Hospital, at any rate, the matter "arranges itself," as the French say, and this period may be stated at about a fortnight—that is, about the rough average length of a patient's sojourn under treatment, through convalescence, until she is discharged. Short, indeed, for the obvious reason that the management cannot afford to house convalescent women for the month, in order to gratify a taste for doing sums in arithmetic. Such a course would seriously interfere with the usefulness of a charitable institution, which has grown so popular with the sick poor that no less than 703 cases were treated in 1903 in the midwifery department alone. (In that number Dr. Crago will be glad to learn only two deaths occurred, giving the very low rate of 2.85 per 1000, or 1 in 350.)

The other enquiry is unworthy of an answer. It is asked, How far are cases of eclampsia excluded from the hospital? In other words, how far has the gentle art of *faking* been pursued? The innuendo is obvious. The proper reply is *Honi soit qui mal y pense.*

Your correspondent wonders at the results published by the Women's Hospital, calling them *marvellous.* Well, all I have to say is, wonder is a congenial and appropriate mood for certain minds. I hope that in his case it will yield the teaching of experience.

In conclusion, will Dr. Crago make an endeavour to find the mortality of the other maternity hospitals of Sydney — at any rate of that with which he is connected? The Government Statistician is pretty trenchant in commenting on the manner in which childbed returns are made, and a good example towards reform might be set by hospital authorities. It will be quite sufficient (and if comparison is desired it would be requisite) to take the mortality on the basis I describe above, viz., that occurring during treatment by the hospital officials.—I am, etc.,

A. WATSON MUNRO,
Honorary Surgeon, Women's Hospital, Sydney.
May 7th, 1904.

(*To the Editor of the Australasian Medical Gazette*).

Sir,—I have to thank you for permission to peruse Dr. Watson Munro's letter, and to reply to it in this issue. Dr. Munro has only to refer to his own report to his board for my authority, *re* Matthews Duncan's four-week period: *vide* eighth annual report of the Women's Hospital, pages 13-14, where the following paragraph occurs:—"Coghlan says: 'Writing in 1871 Dr. Matthews Duncan declared (concerning the United Kingdom) that no fewer than 1 in every 120 women die within *four weeks* of childbed!" (Italics mine.) I was evidently right in my surmise that the statistics of the Women's Hospital did not cover a like period, as Dr. Munro now admits that the period was only a fortnight. I thank him for confirming my suspicion. I do not think anyone will claim that it is fair to compare a mortality rate occurring within a fortnight of labour with that occurring within from four to six weeks after labour.

Dr. Munro in his letter seems to imply that 703 women had been confined in the Women's Hospital during 1903, whereas only 272 were delivered there, the remaining 431 having been attended in their own homes. The mortality statistics of the institution with which I am connected were submitted to the President of the Birth Rate Commission for the five years asked for, viz., 1898-1902, during which period there was not a single death from puerperal fever.—I am, etc.,

W. H. CRAGO,
May 11th, 1904.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—My attention has been drawn to a letter appearing in your issue of 20th April, in which Dr. W. H. Crago offers some remarks on the subject of the recent failure to amalgamate the Women's Hospital with the Benevolent Society of New South Wales. In what capacity Dr. Crago writes is not quite evident. It is clearly to be seen, however, that he cannot be taken to represent the management of his institution, because of the remarkable lack of acquaintance he displays as to the facts of the case. This being so, I at first thought of disregarding his communication, but on second thoughts it appeared that your readers, who naturally have not been fully seized of the facts, might be misled by the letter of a medical officer of the Benevolent Society.

The writer is apparently apprehensive of a desire on the part of the management of the Women's Hospital to impugn the Benevolent Society as the result of the failure to amalgamate the two institutions. This, I may say, is purely imaginary and, moreover, ungenerous.

The directors of the Women's Hospital have throughout the negotiations, and up to the present, made no reference directly or indirectly disparaging the Benevolent Society; but regarding the cause of the failure to amalgamate, as the matter is now called a question in this matter, I have thought it well to place before you at the outset, copies of the correspondence and minutes relating thereto, from which your readers may draw their own conclusions, and which, I trust, will set the question, once and for all, at rest.

The initial step in the proposed amalgamation was taken on December 30th, 1902, when a conference between the directors of the Women's Hospital and Sir Arthur Renwick, President of the Benevolent Society, agreed (subject to necessary approval) upon a basis of union to be adopted. This was duly confirmed on the part of this institution at the following annual meeting of subscribers, held on March 5th, 1903, and the board of the Benevolent Society were accordingly notified with an intimation that the management of the hospital might be immediately taken over by the newly-appointed conjoint board as agreed, and that the assets would be transferred when required. To this a reply, dated March 11th, was received to the effect that pending the proper constitution of the new board, embracing the appointment of Government nominees, the matter must be postponed. On April 22nd a letter was again forwarded by the acting secretary of this institution to the Benevolent Society requesting that the management be taken over by the end of April. At the beginning of June, 1903, this was effected, and the supervision at Crown-street was undertaken by the lady superintendent as agreed.

Unfortunately, however, the administration was not calculated to run smoothly, and it was at once evident that the expectation of the promoters of the scheme that affairs could be carried on without friction were not to be realised. The complete alteration of conditions at the hospital in Crown-street, now brought about, together with a peculiar position in which the matron found herself placed, were a source of open dissatisfaction amongst hitherto staunch supporters of that hospital, so much so that a petition, subscribed in the neighbourhood of the hospital, was submitted, praying for withdrawal from the amalgamation and re-establishment of the old régime. Meanwhile the ladies representing the old board of the Women's Hospital, and now constituting the ladies' committee of the new conjoint board, naturally resented being totally ignored in the matter of the management of the Women's Hospital department, that being essentially their own province, and at the meeting of the latter on June 15th, convened for the purpose of handing over the assets of the Women's Hospital to the conjoint board, expression was given to this feeling by the proceedings. The report of that meeting (contained in a letter dated June 20th, 1903, to the President of the Benevolent Society), together with extract from the minutes of a subsequent meeting held on July 28th (also forwarded to that society), and copies of correspondence, are enclosed herewith, and I shall feel obliged if you can find space to publish them in your next issue.

Apologising for trespassing so much upon your valuable space, I am, etc.,

DAVID FELL,
Honorary Secretary, Women's Hospital.
Sydney, May 12th, 1904.

[The position of affairs is sufficiently explained in Mr. Fell's letter, and we are quite unable to publish the lengthy correspondence attached to it, owing to the great pressure upon our space.—EDITOR *A.M.G.*]

"AN INTRODUCTION TO MODERN THEORIES OF IMMUNITY."

(To the Editor of the Australasian Medical Gazette.)

Sir,—I have no wish to carry on a correspondence merely for the sake of controversy, but the consequence of the adoption of the current opinion that toxin, after a very brief interval, cannot be dislodged from the tissues by antitoxin are such that only the clearest demonstration of the theory as a fact will make me believe it. And that demonstration has yet to come. Professor Welsh says: "It is an accepted fact that in a living animal, after a certain brief interval, antitoxin is powerless to dislodge the toxin, except in very special circumstances." With his permission, I would like to recast that sentence, and divide it into two parts. (1) It is an accepted *fact* that in a living animal after a certain brief interval, antitoxin, hypodermically administered, is unable to save the animal from the effects of a lethal dose of the toxin. (2) It is an accepted *theory* that this result is due to the failure of the antitoxin to dislodge the toxin from the tissues which it affects. The first I do not deny; the second I cannot at present agree with. Descoss and Barthelemy, (*Jour. de Phys. and Path. Gen.*, 1902, vol. iv., No. 5), in a series of experiments on the living animal with tetanus toxin and antitoxin, came to the following conclusions:

1. Given 24 hours *before* injection of toxin, the antitoxin was an efficient protective, however it might be introduced into the animal by the needle.

2. Given 24 hours *after* the toxin, no method which compelled the antitoxin to pass through the lymphatics into the blood was able to save the animal from the effects of a lethal dose of the toxin.

3. Forty-eight hours after the injection of the toxin, in full tetanus, only the intra-dural injection of the antitoxin was capable of saving the animal. With the last the present discussion has nothing to do, as its success is due to the direct application of the antitoxin to the cerebro-spinal fluid, which cannot be reached through the circulation. But why is there such a difference between the hypodermic and the intravenous uses of the serum? There is no one who will deny that by the hypodermic injection of the antitoxin the blood of the animal or patient can be made so strongly antitoxic that it is capable of protecting another animal against the infection, and yet, after a certain interval this method of administration entirely fails to save the patient. It cannot fail from any want of antitoxin in the blood, and to be orthodox, we can only explain this failure by saying that the toxin has become so firmly fixed that antitoxin cannot dissever it from the tissues. The intra-venous method of administration is now adopted, and the animal is saved. This result cannot be produced merely by the addition of more antitoxin to a circulation already saturated with it. There must be some additional element in the serum which is operative when introduced directly into the blood, but the therapeutic effect of which is not obtained when the serum passes through the lymphatics into the circulation.

In diphtheria the same theory of the inability of the antitoxin to dislodge the toxin is accepted as an explanation of its incapacity to reach those cases in which it fails.

Cairns (*Lancet*, December 20th, 1902) gives an account of a series of desperate cases treated by the intravenous administration of A.D.L., in which a large proportion were saved. In many cases the serum had been freely used hypodermically, but without avail, and it was only as a last resort that huge doses of serum were injected intra-venously. Cairns, himself in casting about for an explanation of his success by the intravenous method, after the failure of the hypodermic, made two suggestions, and one of these, in my opinion, is correct. He said that it seemed as though the lymphatics removed some element from the serum which was operative when it was administered intra-venously.

My own experience of the use of 19,000,000 units of anti-diphtheritic serum orally during the last six years has satisfied me that this missing element, besides being antiseptic, is also recuperative and reparative to all the tissues which are affected by the diphtheritic toxin. It is eliminated from the serum by the lymphatics, so that by adhering to that method of administration alone the profession have never suspected its presence, and have lost the benefit of its action on the disease. The addition of this action to the antitoxic by the intravenous or oral use of the serum makes all the difference in the world when the infection has become systemic. From the use of a small quantity of the anti-tetanic serum orally I have reason to believe that the similar element present in it has the same effects on the structures affected by the tetanic toxin, and in antistreptococcic serum this action is very marked. Before repair and recuperation can begin, the toxin must be removed, and my present opinion is that the antitoxin removes the toxin, and this other element repairs the damage it has left behind.

For these and other reasons, which cannot be fully discussed here, I am unable to agree with Professor Welsh that Besredka's findings are not in accordance with the phenomena as they appear in a living animal. The remainder of the last paragraph of his letter applies equally to the experiments conducted by Wasserman and Takaki.—I am, yours,

D. MONTGOMERIE PATON.
Melbourne.

RECURRENT SCIRRHUS TREATED BY X-RAYS.

(To the Editor of the Australasian Medical Gazette.)

Sir,—Will you kindly allow me to make a slight correction. In the report on the discussion of Dr. Fox's paper on a case of recurrent scirrhus successfully treated by X-rays (*Australasian Medical Gazette* for April, 1904), I am reported to have said that I saw "no reason why they should occur." I am sorry my remarks were misunderstood on that point. I believe I did say that I was "not afraid of recurrence."

It should not be forgotten that, however encouraging the successful results are in these cases, there is no reason to overlook the fact that one of the strongest features about cancer, and the one that makes it so dreaded, is the horribly persistent tendency of the disease to return, even when it has apparently been most completely extirpated, as it can be sometimes by surgical operation; and, so far, it is much too premature to suppose that the X-rays has altered this most striking characteristic of the disease; and although most of the cases I have treated so far have not recurred again, yet the time is too short to boast much about that, and I have seen it recur after it had apparently disappeared under the X-rays; and the reason I said that I was not afraid of the recurrence was because in each of these cases it has again been mastered by renewal of the X-rays, and they are alive and well at present. In one case I have had three distinct recurrences to deal with in a period of about 18 months, but the patient seems well at present. This was a bad case that had been operated on previously twice, and would be hopeless to operate again. This illustrates the difference between recurrence which when it can only be dealt with surgically and the X-ray treatment, and is such a distinct point in its favour in recurrent scirrhus. The surgeon must soon reach the limit of his operations, but, so far I can see no limit to the number of times a recurrence might be mastered by the X-rays in a favourable case. In fact, with all this work, time only can prove these two important points—(1) the number that will recur, (2) and the number of times these can be successfully stopped by the X-rays. Judging by present results, I think it will be found possible to keep a majority of these cases alive in health and comfort for many years that would otherwise come to the usual termination. It must be understood that the above remarks are intended to apply to recurring scirrhus only, as experiences with other forms of recurring malignant disease after operation are not so favourable; but good results are sometimes met with, provided the glands are not badly involved.—I am, etc.,

T. G. BECKETT.

Northcote, Melbourne.

HONORARY SURGEONS TO HOSPITALS.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—In your last issue I read with great interest the remarks of "Aqua" on the above now very prevalent subject, and should feel much obliged if you would kindly extend to me the courtesy of a small space in your valuable pages to make a few remarks in reply. It is a surprise to me, I must confess, to learn from "Aqua" that after six years' experience as honorary surgeon he found it would have been better for him had he not occupied such a position, as harm more than good resulted to him, the reason given to prove his mistake being that, financially, he lost in the anæsthetic fees which he would otherwise been entitled to had he not held such a position. Now, surely "Aqua" does not hope to elicit due appreciation and endorsement of his action in refusing to act in such a capacity from country practitioners on such grounds. If so, I am very much afraid he will be sadly disappointed. From personal experience, both as a hospital and a non-hospital surgeon in country towns, extending over some considerable time, I have come to the conclusion directly opposite to "Aqua," viz., that it is a decided advantage for medical practitioners to become attached to their local hospital; and in proof of my contention I beg to submit the following few out of many reasons for the consideration of "Aqua" and your readers:—

1. It prevents the occurrence of a public institution being converted into a private hospital, conducted expressly in the interests of the hospital doctor and his patients, even though supported by public subscriptions and Government subsidy.

2. It prevents to a great extent the losing of patients by the non-hospital medico. Thus patients of the latter, whom for various reasons are compelled to undergo treatment at the hospital, on their recovery become naturally attached to the hospital medico who pulled them through, or, if children, their parents; consequently, like the golden hours, they are lost for ever.

3. It prevents the enormous amount of jealousy and ill-feeling which exists between the hospital and non-hospital medicos, and professional etiquette, which formerly was an unknown quantity, will reign supreme.

4. It prevents a flux of operation cases to the large city hospitals. Patients who cannot be operated upon in the local hospital by their own medical man prefer, either from personal feelings or want of confidence in the local hospital medico, to enter the city hospitals for operation; and this feeling does not, I fear, receive very much discouragement from the non-hospital medico, as the latter may perhaps feel it would not tend to increase his surgical reputation to have his patients operated successfully upon by his opponent. Furthermore, the combined skill of all the medicos in the town, at the hospital, would certainly prevent the departure elsewhere of operations to a great extent.

5. It prevents epidemics of infectious disease from increasing to a great degree. Patients prefer to remain at home, to be treated by their own doctor, than repair to the local hospital to be treated by a stranger; consequently the imperfect isolation, or in some cases almost absence of isolation, tends to cause an increase of infectious disease. A well-known large outbreak of typhoid fever of recent date was largely attributed to this cause.

For fear of trespassing too extensively upon your valuable space, I will conclude with the above few remarks, and by stating that it is my firm belief if country hospitals gave free access to all medical men practising in the town to treat their own patients, the hospital would then fulfil all the requirements for which it was intended, and the medical men would become happier and more prosperous.—I am, etc.,

E. SYDNEY HAWTHORNE, F.R.C.S., L.R.C.P.

Mudgee, 23-4-04.

OBITUARY.

Percy Bloomfield Stewart, M.B., Ch.B. (Melb.), Casino, N.S.W.

Dr. Percy Bloomfield Stewart died rather unexpectedly in Brisbane on the 3rd of this month, from pneumonia. He was on a short holiday from Casino, N.S.W., where he has been in practice during the last three years. He was M.B., Ch.B., Melb., a first-class honorsman, and took a scholarship at his final examination. After a year's residence at the Melbourne Hospital, he went into practice at Casino. There he soon made a name for himself as a surgeon and accoucheur. He was of a most amiable nature, and extremely popular with all who knew him. He leaves a young wife and one son to mourn him, with whom great sympathy will be felt. He was only 29 years of age.

THE BATTLE OF THE CLUBS.

The Medical Profession and the Manchester Unity Oddfellows.

At the fourth day's session of the grand movable committee of the M.U. Oddfellows, held in Sydney on May 6th, Bro. J. F. O'Connor (Past-Grandmaster, Tamworth district) submitted the following resolution :—" That in view of the unsatisfactory relations existing between medical officers and certain lodges of the Manchester Unity in this State, and the difficulty experienced in obtaining qualified men to fill the position of lodge medical officer under present lodge agreement, the district affirms that it is expedient, in the interests of the order and its members, that a medical agreement be framed which would be acceptable to the Unity and the British Medical Association, to be termed the Manchester Unity Medical Agreement, to apply to all lodges in this State, or to country lodges outside the city of Sydney and suburbs."

The Grandmaster considered their relationship, on the whole, with the medical profession was one that they should congratulate themselves upon. There were isolated cases where friction had arisen, but with a little more of the " give and take " principle, a little more courtesy on both sides, many difficulties had been swept away. During the 64 years that their society had been established they had always allowed matters medical to be arranged locally. Their society was being gradually but slowly forced to realise that it was necessary to form a combination of some kind for the security of its benefits to the members. The pressure had been brought to bear so heavily in some instances that at last the resolution had been placed on the business papers. He asked the medical gentlemen to consider the claim of their order for consideration, seeing that in 1902 no less than £22,000 was paid away for medicine and medical attendance.

Instances were given of trouble existing with medical officers belonging to the New South Wales Branch of the British Medical Association.

The mover added to the motion.—"That the committee approves of the proposal of the Tamworth district, and that the matter of giving practical effect to the proposal be left in the hands of the officers of the order, with instructions that they enter into immediate communication with the New South Wales Branch of the British Medical Association with a view of framing such agreements."

The following amendment was moved :—" That in the opinion of this committee it is impossible to frame any medical agreement that will operate with satisfaction to all lodges and their medical officers. But that this G.A.M.C. recognises the gravity of the position as now exists between the medical profession and friendly societies in some parts of the State, and hereby instructs the Grandmaster and board of directors to take steps to bring the matter under the notice of the Friendly Societies' Association by means of the delegates to that body, with the object of taking steps to obtain medical men to attend on the members of our societies."

The amendment was fully discussed, and on being put to the vote declared lost. The motion was carried.

Armidale.

The medical officers of the various friendly societies in Armidale have resigned their appointments in consequence of the refusal of the lodges to accede to certain requests for the readjustment of rates of remuneration, etc. We feel sure that the medical profession will stand by these medical officers in their struggle, as they did in the case of the dispute at Inverell. Any medical man who accepts an appointment at Armidale in opposition to the local medical men will not only be doing himself an injustice, but will be injuring his profession generally, and he must be prepared to accept the consequences of such a foolish action.

Ballarat.

Not long ago the Ballarat Lodge, M.U.I.O.O.F., was approached with the view of organising a medical institute in conjunction with other clubs, and one of the main proposals was that two doctors should be engaged at liberal (?) salaries (£600 per annum each) to devote the whole of their attention to the work of the institute. It was stated that the services of experienced practitioners could be readily obtained in the event of the institute being formed, but as it was pointed out that the doctors who had been elected by the lodges were satisfied with the existing conditions and were desirous of continuing in office, the movement for the establishment of an institute was deferred. In regard to the Ballarat Lodge of Oddfellows, the membership totals 500, and the doctors are allowed 14s per member per annum, exclusive of extras. We hope the Medical Defence Association of Victoria will keep an eye upon the Ballarat friendly societies, and take steps to at once nip in the bud any proposal for the formation of the medical institute there.

UNIVERSITY INTELLIGENCE.

University of Sydney.—At the last meeting of the Senate, in reference to a communication from the council of the Linnæan Society on the subject of the Macleay Fellowships, a report was received from the professorial board covering regulations which had been drawn up under which research students might be admitted to the University laboratories. The regulations were adopted, and instructions were given for a copy of them to be forwarded to the Linnæan Society. A report was received from the professorial board in reference to the scheme proposed by the Undergraduates' Association for the erection of a union building at the University. The board reported that in its opinion the erection of such a building was eminently desirable, and requested the Senate to assist the movement as far as possible. On the motion of the Chancellor it was resolved—" That the Senate contribute from the Challis Fund £ for £ for subscriptions obtained by members of the University up to a limit of £5000 for the erection and furnishing of a suitable union building on the University grounds."

PARAFFIN INJECTIONS are now largely used for the improvement of sunken noses, deficient scrotum from birth, after removal of breasts, for the closing up of fistulas, cleft palate, hernia, for prolapsus of anus and uterus, and after rectal operations. The proper thick-walled metal syringes, with vulcanized finger rests and two bayonet mounted needles, straight and curved, in metal case, price 15s., may be obtained from Mr. Bruck, 15 Castlereagh-street, Sydney. Mr. Bruck also supplies Grubler's best Paraffin at 2s. 6d. per packet of 250 gr.—[Advt.]

PUBLIC HEALTH.

New South Wales.

Health of the Metropolis.—Dr. Armstrong, the City Health Officer, reports:—The deaths for the month numbered 407, equal to an annual death rate of 9.42 per 1000 of the estimated mean population. This is a lower mortality than has been experienced during any April of the last quinquennium. Deaths from diarrhœal diseases (diarrhœa, dysentery, enteritis) were well below the average for the month of April. They numbered 47, while the quinquennial average for the month is 66. Infantile deaths, as usual, constituted the greater part of the total mortality from these causes. They numbered 31. Zymotic diseases, exclusive of diarrhœa, accounted for 36 deaths. Whooping-cough, which was rather fatal this month, accounted for 13 of these, diphtheria for 6, typhoid fever for 8, puerperal fever for 7, and scarlet fever and erysipelas for 1 death each. No deaths were registered from measles, influenza, or cerebro-spinal fever. Phthisis caused 32 deaths, the quinquennial average for the month being 38. Mortality from other causes presented no marked divergencies from average figures. Infantile deaths from all causes numbered 90. The attacks of notifiable infectious diseases totalled 239. Scarlet fever was notified 95 times, diphtheria 76, and typhoid fever 65. Both scarlet fever and diphtheria were rather more prevalent than usual, though in respect of the former there has been a marked decrease during the past three months. Typhoid fever has been less prevalent this month than during any April since notification became legal. Three cases of bubonic plague occurred during the month. In each case the person attacked was employed in handling produce.

Vital Statistics.—The report of the Government Statistician for April on the vital statistics of the metropolis states that during the period in question 977 children were born (489 males and 488 females), and 429 persons died (217 males and 212 females). The birth record was 45 less than the average for April during the previous five years, whilst the deaths were 32 lower than the mean rate for the same period. The birth rate was 1.91, and the death rate .84 per 1000, corresponding respectively to annual rates of 22.92 and 10.08 per 1000. Deaths of non-residents in the various hospitals are excluded from the record. The excess of births over deaths was 548. The births relatively to population are lower than the rate for April during the last five years. The illegitimate births numbered 88, and comprised 9 per cent. of the total births. The deaths, both numerically and proportionately, present satisfactory conditions, the mortality rate being the lowest for the month of April during the last 10 years. In respect of young children the rate is particularly favourable.

Sanitary Matters at Parramatta.—At a meeting of the Parramatta Borough Council recently, it was agreed "That the report from the assistant Medical Officer of Health, in respect to the insanitary condition of the borough, be referred to the sanitary committee for report." In the report referred to, Dr. Stokes stated that during the past five or six years there had been a marked increase in the number of typhoid cases. In his opinion the cases of typhoid that occurred in Parramatta during the past two months had been due (1) to season influences, (2) to the dissemination of infection by milk from a certain dairy, (3) to the establishment of secondary centres of infection by the above milk-infected cases, the extra-corporeal life of the organism being favoured by the existing conditions of drains and closets in the borough. With a view to preventing the spread of the disease he recommended a complete and up to-date system of sewerage, arranged to carry off all sewerage wastes from premises in the borough.

Model By-laws.—Representatives from the Windsor Municipal Council recently waited upon the Treasurer with a request that the application of section 71 of the Health Act to that municipality should be postponed, in order that the aldermen may have an opportunity of making representations on the matter to the Board of Health. The section in question gives power to the Governor-in-Council to declare a certain area of land to be a "sanitary area," thus giving the municipal council power to make by-laws for the carrying out of effective sanitary measures, as well as providing for the collection of household refuse. It was suggested that the sanitary by-laws should not be applied for at least six months, as the increased expenditure that would be incurred in putting them into operation would be embarrassing to the municipality in the present state of its finances. The Treasurer has referred the question to Dr. Ashburton Thompson, President of the Board of Health, who has agreed to bring the request under the notice of his colleagues, with a view of seeing what could be done in the matter.

Adulteration Prosecutions.—At a recent meeting of the Sydney City Council the health committee advised that the city health officer take action to prosecute in regard to adulterations of concentrated milk, vinegar, and milk, as specified in his report of April 12th, and that cautions be administered in regard to other cases of adulterated milk mentioned in such report. The resolution was opposed on the grounds that it would kill several thriving industries, and also that the Premier had stated his intention of remitting any fines that might be imposed. After discussion the recommendation was approved on the casting vote of the Lord Mayor.

Bubonic Plague.—Since our last issue six cases of bubonic plague have occurred in Sydney. One of these has proved fatal. We understand that Yersin's plague serum has been freely used, and appears to be giving satisfactory results so far. The present outbreak has been traced to infected rats in the neighbourhood of the Darling Harbour wharfs, and also near the Belmore Market. Every effort is being made to destroy rats and mice, and a large staff of rat-catchers is employed by the Health Department of the City Council. One of the rat-catching staff is the latest to be infected with the disease.

New Zealand.

Bubonic Plague.—A death occurred on April 26th at the Auckland Hospital from plague. The deceased was a young man who had been employed in the city removing dead rats from a cellar shortly before taking ill. A bacteriological examination disclosed the presence of plague bacilli. Another patient in the hospital, who also had been engaged removing dead rodents, has developed symptoms of plague. He has been isolated. The authorities are taking all necessary precautions by the isolation of contacts and fumigation of premises where the men were employed to prevent the spread of the disease.

Queensland.

Bubonic Plague.—Three cases of plague occurred in Brisbane on the dates respectively mentioned, namely :—On May 3rd, a man, aged 26 years, a racehorse trainer, employed at the Breakfast Creek racing stables, and residing at Wickham-street and a youth, aged 16 years, employed in a grocer's store at Toowong, and residing at Alpha-street, in the same town. The stables and store referred to received their supplies of fodder from the "infected area." On the 5th May, a man, aged 22 years, employed as a cook in an oyster saloon, situated near the city. This patient died on the evening of the 5th instant.

Plague Hospital, Brisbane. — Admitted during the week, 2; died during the week, nil; discharged during the week, nil; remaining under treatment, 2. Total number of cases that have occurred in Brisbane since February 10th, 1904, 14; total number of cases that have occurred in Cairns since February 16th, 1904, 2.

Victoria.

Infectious Diseases.—The return of infectious diseases for the fortnight ended April 25th, presented to the Board of Health, showed a decrease in the number of cases of typhoid fever reported. For the whole of Victoria the cases recorded numbered 121 and the deaths 9, as against 235 cases and 12 deaths for the corresponding fortnight of 1903. In the metropolitan area there were 37 cases and 2 deaths, as against 51 cases and 3 deaths for the corresponding period last year. Diphtheria cases increased from 57 cases to 94 for the whole State, but the deaths decreased from 5 to 4. For the metropolitan area the diphtheria cases increased from 24 to 46, and the deaths numbered two in each instance. Dr. Norris said the majority of the diphtheria patients were children who had gone back to school before infection had fully ceased, and had conveyed infection to other children. A return dealing with infectious diseases which has been furnished to the sewerage committee of the Metropolitan Board of Works by the Government Statist shows that during 1903 the deaths from typhoid fever in the metropolis were at the rate of 12.95, and in urban and rural districts 26.74 per 100,000 of mean population,

West Australia.

Smallpox.—One case of smallpox and several suspected cases of the same disease were reported from the steamer "Sultan," which arrived at Broome from Singapore on May 2nd. The patients are coloured members of the vessel's crew.

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HOSPITAL INTELLIGENCE:

The Women's Hospital, Melbourne.—The committee have done away with the numbers over the beds and simply put the Christian and surnames of the patients on the cards without prefix of Mrs. or Miss.

Sydney Hospital for Sick Children.—At a meeting of the Board of Management of the Sydney Hospital for Sick Children last month a letter was read from the private secretary of the State Governor which contained the following :—"A despatch has been received from the Right Hon. the Secretary of State for the Colonies intimating that his Majesty the King has been pleased to approve of the grant of the title 'Royal' to the Sydney Hospital for Sick Children, and that her Majesty the Queen has also been pleased to approve of its being designated the 'Royal Alexandra.' Her Majesty at the same time sends a cheque for the sum of £20 as a contribution towards the expense of the institution." It was decided to call a special general meeting for May 9th, to alter the name of the institution to that of the Royal Alexandra Hospital for Children.

Royal Prince Alfred Hospital.—Mr. T. Waddell, State Treasurer, has approved of an additional sum of money being expended on the pavilions in course of erection in connection with the Royal Prince Alfred Hospital. The fresh expenditure, amounting to about £1500, is rendered necessary in order to complete certain portions of the pavilions without delay.

Sydney Hospital.—At the last monthly meeting of the board of directors, the recommendation of the house committee, supported by the recommendation of the honorary medical staff, that an honorary assistant skiagraphist should be appointed, was approved, and Dr. W. H. Read, M.B., Ch.M., Syd., Diploma of Public Health, Cambridge, was appointed. The proposed additions and alterations to the south wing were considered in detail and approved. It was decided to urge the Government to proceed with the work without delay. The tender of Mr. William Cotter for installing hot and cold water into the centre of the wards in the new structure, in accordance with the plans and specifications prepared by the honorary architects, Messrs. Robertson and Marks, was accepted.

Queen Victoria Homes for Consumptives, N.S.W.—At the last monthly meeting of the house committee of the Queen Victoria Homes for Consumptives Sanatorium, Wentworth Falls, and Thirlmere, the medical superintendent's report at the sanatorium showed that during the past month four cases had been admitted and four cases discharged. Of the latter, two patients left with the disease completely arrested, two were much improved. There are 21 patients in residence. The matron's report (Thirlmere) showed that there were 40 patients in the home. During the month 12 had been admitted, 11 had been discharged. Of the latter seven left much improved. The hon. treasurer reported to having received a cheque for £179 3s, the proceeds of a fête held at Ashfield; and from the Mayoress of Woollahra a cheque for £37 12s 6d collected by ladies in that suburb. It has been decided by the committee to complete the original scheme for the construction of the sanatorium at Wentworth Falls. This is to be accomplished by adding to the present buildings. The additions will include the erection of two additional six-bed wards and four single-bed wards; also six or eight outdoor shelter-sheds similar in construction to the one which was exhibited at the recent horticultural fête at the Exhibition Building. A large kitchen block, with all out-offices and necessary appendages, is also to be erected. When these additions have been made, the sanatorium will have accommodation for 40 beds, also complete accommodation for the staff, and an administrative block with a kitchen and out-office block at the rear. In close proximity to the site is a large block of land suitable for the construction of a dam from which a supply of water for the institution can be readily obtained. The land has been given by Mr. Walter Hall to the committee for this purpose, and tenders are now being called for the construction of the dam and the laying on of a service of water from it to the buildings and grounds.

The Women's Hospital, Sydney.—At the last monthly meeting of the board of directors of the Women's Hospital the treasurer's financial statement showed an overdraft at bank of £395 7s 2d. The resignation of Dr. Charles MacLaurin from the honorary staff was accepted with regret, and it was decided to invite applications for the position. The matron's report for the month of March showed 37 patients admitted, 21 births, 36 discharged, and 26 remaining, together with 8 babies. The daily average for the month was 26.

The Coast Hospital, Sydney.—During April, 279 patients were admitted. Of these, 183 were general cases, and 96 were suffering from infectious diseases. The number discharged was 266, of which 226 were cured, 37 relieved, and 3 unrelieved. Sixteen died. There remained in the hospital at the end of the month 302 patients. Of these, 194 were general cases, and 108 infectious, consisting of enteric fever, 31; diphtheria, 23; scarlet fever, 38; erysipelas, 13; and plague 3. The daily average number resident for the month was 311, and 22 were transferred to convalescent homes.

Infectious Diseases Hospital, Melbourne.—It is probable that in July next the Infectious Diseases Hospital will be opened. The seven municipalities which have undertaken to manage the hospital have appointed delegates to represent them upon a committee of management, which is to consist of 15 members. The representation is divided as follows:—Melbourne, 6 members; Fitzroy, 2; St. Kilda, 2; Richmond, 2, and North Melbourne, Brunswick, and Coburg, 1 each. The next step will be to appoint a staff and furnish the wards. The illness of Dr. Gresswell is offered as a plea for the later delays, as it had been hoped that the advice and assistance of the chairman of the Board of Public Health would have been available in connection with the securing of the necessary staffs and in the matter of the internal equipment of the hospital.

Dunedin Hospital, N.Z.—A brass tablet has been erected in this hospital, just inside the entrance, to the memory of the medical gentlemen who have died while in the service of the institution. The tablet bears the following lettering:—"Dunedin Hospital Roll of Honour, in memory of those officers who have died at their post of duty." Then follow the names of T. J. Tighe, L.R.C.S.I., L.M., July 6, 1878; E. J. McAra, M.B. and C.M., October 3, 1900; and G. P. Brown, M.B. and C.M., May 24, 1903.

Lismore Hospital.—There has been some friction between the hospital committee and the medical officers. At the last meeting applications for the position of nurse were considered, the result being the appointment of one nurse, who was not acceptable to the doctors. It was admitted on both sides that the qualifications and credentials of the two applicants were equal. The committee's choice is 30 years of age, and has had nine years' experience. The doctors' candidate is 24 years of age, and has had five years' experience. Upon hearing the result of the meeting the medical men asked the committee to reconsider the matter. A special meeting was called, but the committee, by eight to one, declined to re-open the question. The four medical officers have since resigned.

MEDICAL NOTES.

Charitable Bequests.—Miss Manson, who died recently at Fielding, N.Z., has bequeathed to the Palmerston Hospital, £200; the Hokitika Hospital, £250; the Greymouth Hospital, £250; Melbourne institutions, £2000.

Help for Consumptives.—The grand horticultural fête and general carnival in aid of the Queen Victoria Homes for Consumptives in New South Wales was held in Sydney last month. The actual takings at the turnstiles and the booths and stalls amounted to about £1550, and, as there are other receipts due amounting to about £800, the profits throughout may be roughly estimated at about £2000. The Petersham and Marrickville fancy dress fête in aid of the same charity, which was opened by Lady Rawson on April 13th in the Petersham Town Hall, realised over £400.

The Bacteriological Laboratory of the Melbourne University.—This laboratory examines and reports on any disease specimens that may be submitted to it, and last year made nearly 4000 separate examinations for public bodies and private individuals, chiefly in connection with typhoid, tubercle, diphtheria, and hydatids. The Prahran city council has intimated its intention of contributing £20 a year to the funds of the laboratory for services rendered to the council and the poorer residents of Prahran who are unable to pay for bacteriological examinations. In this it is following the example of the city of Melbourne, of the Health Department, and of the Children's Hospital.

PRACTICES FOR SALE.

N.S.W.: Prac. in large town, cash income £600, appts. £200. Price £250; est. 8 yrs.
N.S.W.: Prac. in which £500 yearly can be saved. Furn., horses, everything, £400.
N.S.W.: Prac. near Syd., to be sold with house and land (1 acre). Property £1,280. Prac. £300.
Tas.: A City Prac., returning £800. Cash, appts., £300. Prompt buyer, £150.
Queens.: Coastal Prac., returning nearly £1000. Appts., £320. Furn. and Prac., £500.
Fiji: Prac. returning £700 cash. Price, £200. Books verified by solicitor.
N.Z.: City Prac., Sth. Island, returns over £1000 cash. Price, £500; good introduction.
N.Z.: Country Prac., returns over £1000 cash. Horse and other appt., £220. Price, £800.
N.Z.: Unopp. Prac., cash take over £500. Est. 13 yrs. Price £200. Nice house, 3 acres land.

Mr F. W. LOXTON,
16 O'Connell-street, Sydney.—[Advt.]

Sydney Pathological Club.—The first meeting for this year of the Sydney Pathological Club was held at the Clinical Laboratory, Sydney Hospital, on April 28th. The secretary's report and treasurer's statement were adopted. Professor J. T. Wilson was elected president; Dr. Sydney Jamieson re-elected honorary secretary and treasurer. Professor Wilson, Dr. Jamieson, and Dr. Frank Tidswell were elected the committee. The following communications were made:—Dr. Tidswell—The histological lesions of leprosy. Dr. Greig Smith—The loss of colour in red wines. Dr. MacDonald Gill—A peculiar cord lesion, with exhibition of slides. The following demonstrations were given:—Dr. Greig Smith—Blood smears of South African cattle diseases. Dr. J. P. Hill—(1) Cystic genital organs of native bear (*Phascolarctus*); (2) Spores of myxobolus, a sporozoan parasite in the frog.

The Royal Society of New South Wales.—The annual meeting of the Royal Society of New South Wales was held on May 4th. Professor F. G. Guthrie, the retiring president, chose for his retiring address the subject of chemists and chemistry in the State. He said there were now 300 students attending lectures on chemistry at the University, while 150 were undertaking practical work in the laboratories. Then followed an instructive sketch of the existing facilities in the State for laboratory and analytical work in chemistry. He gave details of the work accomplished by the Government's Analyst Department since its establishment, and reviewed the progress of the science among private manufacturers. Chemistry in New South Wales did not give employment to very large numbers, but those who followed it suffered severe disabilities owing largely to the absence of a qualifying standard for the profession. He proposed that the Government should insist upon qualification, and urged the establishment in the State of a central scientific research station. At present efforts in chemistry suffered by excessive decentralisation, and, if possible, this should be altered. The following officers were elected for the ensuing year:—President, Mr. C. O. Burge; vice-presidents, Messrs. W. M. Hamlet, Prof. Liversidge, Prof. Warren, Prof. F. B. Guthrie; hon. treasurer, D. Carment; hon. secretaries, Messrs. J. H. Maiden and G. H. Knibbs; members of council, Messrs. S. H. Barraclough, Prof. David, T. F. Furber, H. A. Lenehan, C. Moore, Dr. F. H. Quaife, H. G. Smith, Dr. Walter Spencer, J. Stuart Thom, and H. C. Russell.

The Feeding of Infants.—At a meeting of the Society for Child Study at the Royal Society's Rooms on April 5th, Dr. Clubbe read a paper upon the feeding of children. Dr. Clubbe dealt with the necessity for having properly controlled laboratories for the preparation of humanised or sterilised milk, and pointed out that the boiling of milk did not destroy the toxin in it. Boracic acid, while it kept milk sweet for a time, was congenial to the development of certain bacteria. He referred to the relatively different sizes of the stomachs of children and to the necessity for closely studying each child. He considered it to be a step in the right direction to deliver lectures on the care and treatment of infants to the elder girls in schools. As an instance of how ignorance had caused disease in an otherwise healthy child, he stated that a mother had ceased to give her baby the maternal nutriment on which it was thriving, in order to try the alleged virtues of sterilised milk. The result was that the child developed rickets and scurvy, and became partially paralysed in the lower limbs. It should be a stigma and a disgrace for a mother not to nourish her own child except under certain circumstances.

Arrangements were recently made for the accommodation of a number of consumptives at a sanatorium close to the quarantine station at Point Nepean, Victoria. The first step towards utilising this sanatorium was taken last month, when the Premier gave authority for sending 25 consumptives to the place.

The Perfection Formaldehyde Fumigator.—We have received from Messrs. Fassett and Johnson a sample of Seabury's Perfection Formaldehyde Fumigator. This is compact, handy, reliable, and always ready for use. It is easily ignited with a match, and, as it does not flame, can be placed anywhere with the greatest safety. The standard adopted by the leading boards of health for thorough disinfection in four hours, the shortest time recommended, is one grain paraform to the cubic foot of space, but where a longer exposure can be obtained, two-thirds of this amount is sufficient. The Perfection Formaldehyde Fumigators are made in three sizes; the small containing 100 grains of paraform, used for deodorization only. The medium or standard size contains 350 grains of paraform, sufficient to thoroughly purify a small room; the large size containing 1000 grains paraform, one or more of which may be used, according to the area to be disinfected. The simplicity, efficiency, cheapness, and safety in use of this fumigator recommends it for all disinfecting purposes.

PERSONAL ITEMS.

Dr. Hare, visiting medical officer to the Hospital for Chronic Diseases, Diamantina, South Brisbane, has been granted two years leave of absence, and Dr. Turner has been appointed in his place.

Hon. Dr. Butler, the present member for the Hobart seat in the Legislative Council, who had to seek re-election through effluxion of time, has been elected unopposed.

Dr. Walley, one of the honorary members of the hospital medical staff at Tamworth, N.S.W., has been granted six months' leave of absence to visit England on a pleasure trip.

Dr. Chapple, who has been appointed superintendent of the Adelaide Hospital, left Rockhampton, Q., on May 2nd for Adelaide. He was presented with an address and silver tea service by the staff of the Rockhampton Hospital.

Dr. Mary Booth has been appointed lecturer, under the Department of Public Instruction, on "Infant Hygiene," at the Training College and the higher classes of the girls' schools in New South Wales.

According to the London correspondent of the *Sydney Morning Herald*, Miss Mabel Newill has been appointed matron of the Royal Prince Alfred Hospital at Sydney. She was trained at the King's College Hospital, London, and the Manchester Maternity Hospital, of which she holds the certificates; she has also the certificate of the London Obstetrical Society. Her appointments included that of night sister at the Seamen's Hospital, Greenwich, and of ward sister of University College Hospital, London, and she is now acting as home sister at the Hospital for Consumption at Brompton.

Dr. John Gibson, of Windsor, N.S.W., is instructing a branch of the St. John Ambulance Association formed at the Hawkesbury Agricultural College.

Dr. Kelly, the senior resident medical officer at the Brisbane Hospital, who has been appointed resident surgeon of the Croydon District Hospital, leaves Brisbane to enter upon his duties early in June.

Dr. Adams, of Melbourne, has just returned from an extended tour to the Far East, and has resumed practice.

Dr. Angas Johnson, of Adelaide, has resigned his position as councillor in the Adelaide Corporation, and has left on an extended foreign tour. His object is to study cancer, and he expects to be absent for several years.

Dr. F. M. Blackwood, of Summer Hill, Sydney, has disposed of his practice to Drs. Eric Pockley and J. I. C. Cosh, who have entered into partnership. We regret to hear that Dr. Blackwood has been obliged to give up all hope of resuming practice at present in consequence of his precarious state of health.

Dr. E. Maynard Pain, who formerly held the position of medical superintendent of Prince Alfred Hospital, and who subsequently went out to Egypt as medical missionary under the Church Missionary Association, is touring New Zealand in company with Bishop Ridley, of Caledonia, in the interests of the Church Missionary Association. He is expected in Sydney at the end of June, prior to his return to Old Cairo.

We regret to learn that Dr. Ham, Commissioner for Public Health, Queensland, has resigned his appointment, presumably as a protest against the retrenchment proposals of the Government. We hope that Dr. Ham's services will not be lost to Queensland.

Dr. Leonard Redmond, of Charters Towers, has been gazetted to the Commission of Peace for Queensland.

Dr. Orr has returned from a trip to Europe, and resumed practice at 71 Wickham-terrace, Brisbane.

Dr. S. G. Strahan, medical officer of the Melbourne Benevolent Asylum, who has resigned his position, has been presented by the inmates with a testimonial, artistically engrossed by one of their number, and signed by nearly 400 inmates. The staff presented Dr. Strahan with two cases of surgical instruments.

Dr. J. R. Palmer has resigned the appointment of district medical officer, Wagin, W.A.

Dr. O'Brien, Government Medical Officer, has been at Cairns, Queensland, in connection with the recent outbreak of plague there.

Dr. Klaatsch, of Heidelberg University, is to be given every facility to pursue his investigations in Queensland in the study of the skulls of aboriginals. He will accompany Dr. Roth, chief protector of aboriginals, to the North.

Dr. McLeod, who has been practising at Byron Bay, N.S.W., for about 12 months, was given a send off and presented with a souvenir on April 29th by a number of friends prior to his departure for Portland, N.S.W.

Dr. Thacker, of Christchurch, has left New Zealand for a trip to America and Europe.

Dr. C. S. Allen has resigned his position on the medical staff of Seacliffe Asylum, New Zealand, and will proceed shortly to England.

Dr. A. R. Falconer, of Dunedin, N.Z., after finishing his studies on hygiene at University College, London, and the Army Medical College, took his diploma in public health, and during the last three months has been in residence as a medical officer to the West London Hospital.

Dr. Edmund Gibson, formerly a student at the Otago University, after obtaining the qualifications of L.R.C.P. and M.R.C.S. London, returned to Dunedin recently. He intends to commence practice in Timaru.

Dr. Goldie, of Auckland, N.Z., who left for England a few weeks ago, but was detained at Sydney through severe illness, has sufficiently recovered to resume his journey.

Dr. Bennett, who has been house physician at the Auckland Hospital, is now leaving, and returns to Australia.

Dr. J. F. Merrillees, of Auburn, Victoria, has obtained the Fellowship of the Royal College of Surgeons, Edinburgh.

Dr. E. A. Woodward has resigned the appointment of Government Medical Officer and Vaccinator at Wyalong, N.S.W.

Dr. F. G. M. Britten has resigned the appointment of public vaccinator for the district of Christchurch, N.Z.

Dr. T. E. F. Seabrook has removed from Port Darwin, Northern Territory, to Broken Hill, N.S.W.

Dr. Humphrey Marten left Adelaide on May 19th on a trip to England, after an absence of 15 years.

Dr. Goldsmith, Government Medical Officer at Port Darwin, Northern Territory, has been granted six months' leave of absence.

MEDICAL APPOINTMENTS.

NEW SOUTH WALES.

Dey, Robert, M.B. (Syd.), to be Government Medical Officer and Vaccinator at Bourke, N.S.W., *vice* Dr. Charles Henry Scott, resigned.

Read, W. H., M.B., Ch.M. (Syd.), D.P.H. (Cantab), to be Honorary Assistant Skiagraphist Sydney Hospital.

Ross, Chisholm, M.B., Ch.M. (Edin.), M.D. (Syd.), to be a member of the Police Medical Board during the absence of Dr. Mackellar.

Shaw, Frederick Charles, M.B., M.Ch. (Syd.), to be Government Medical Officer and Vaccinator at Wyalong.

VICTORIA.

The following gentlemen to be Resident Medical Officers at the Melbourne Hospital:—

Andrew, Frank.
Bottomley, W. T. S.
De Crespigny, C. C.
Dunhill, T. P.
Green, T. W.
Morris, A. E.
Summons, W. F.
Weihen, A. W.

Sutton, C. S., M.B., Ch.B. (Melb.), to be an additional Anæsthetist at the Women's Hospital, Melbourne.

Sutherland, Dr., late Resident Medical Officer at the Ballarat and Melbourne Hospitals, to be Resident Medical Officer at the Women's Hospital, Melbourne.

SOUTH AUSTRALIA.

Chapple, Frederick, M.B., Ch.B., to be Medical Superintendent of the Adelaide Hospital, *vice* Dr. Bronte Smeaton resigned.

Romeo, Dr. Guiseppe, to be Acting District Registrar of Births, Deaths, and Marriages for the District of Palmerston, during the absence of Dr. Frederick Goldsmith, D.R.

The following to be Medical Officers under the Immigration Limitation Act, 1891

Dr. Gething, Port Adelaide.
Dr. Chenery, Port Augusta.
Dr. Goldsmith, Port Darwin.
Dr. Kinmont, Port Lincoln.
Dr. Stewart, Port Pirie.
Dr. Fulton, Port Wallaroo.

QUEENSLAND.

Kelly, W. R., M.B., B.S. (Melb.), to be Medical Officer at Croydon, Queensland, *vice* Dr. F. W. Webb, deceased.
Kirwin, Dr. P., to be Surgeon to the Hospital and Government Medical Officer to the Port Darwin District, North Queensland.
Taylor, Hon. Dr., M.L.C., to be Surgeon in the Department of Diseases of the Eye, Ear, Nose and Throat at the Brisbane Hospital.
White, G. V., M.B., Ch.B. (Melb.), to be Acting Health Officer and Acting Medical Officer at Thursday Island, during the absence of Dr. Wassell.

WEST AUSTRALIA.

Blanchard, Dr., to be Officer of Health at Cue.
Harrison, Dr. W. H., to be Officer of Health at Esperance.
Lovegrove, Frederick Thomas Alexander, to be Acting District Medical Officer at Kookynie during the absence of Dr. Miskin.
McKell, Dr., to be Officer of Health at Mulline.
Palmer, John Richard, to be Acting District Medical Officer at Narrogin.
Robertson, Dr. Alexander, to be Officer of Health at Wiluna, *vice* Dr. A. W. Crawford, resigned.

NEW ZEALAND.

The undermentioned persons to be Public Vaccinators for the districts set opposite their names respectively, viz.:—

Menzies, Percy William, L.R.C.P., L.R.C.S. (Edin.), Ohaeawai.
Pentreath, Charles Henry Reginald, M.B., B.Ch. (Cantab.), to be Resident Medical Officer at Te Waikato Sanatorium, Cambridge, N.Z.
Porter, Albert Harding, L.R.C.S., L.R.C.P. (Edin.), Waihi.
Sutherland, William, M.B., B.Ch. (N.Z.), Tuapeka Mouth.
Sutherland, Wm., M.B., Ch.B. (N.Z.), to be Resident Surgeon of the Tuapeka Hospital, Lawrence.
Zimpel, Adolph, M.B., Ch.M. (Aberd.), Ormondville and Norsewood.
Aubin, Emile Dupont, M.R.C.S. (Eng.), L.R.C.P., etc., to be a Port Health Officer for the Port of Thames.
Collins, William Edward, M.B. (Lond.), M.R.C.S. (Eng.), to be a member of the Senate of the New Zealand University, *vice* Dr. Charles Lloyd Morice, deceased.
Hay, Joseph Frank Strong, M.B., C.M. (Aberd.), to be an Inspector of Lunatic Asylums, Hospitals and Licensed Houses in the Colony of New Zealand.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

The following persons have been duly registered as legally qualified medical practitioners in their respective States:—

NEW SOUTH WALES.

Ashton, John Hilton, M.R.C.S. (Eng.), 1902; L.R.C.P. (Lond.), 1902.
Brown, Charles James, M.B., Ch.B. (Melb.), 1904.
Cook, Harry Franklyn, M.R.C.S. (Eng.), 1893); L.R.C.P. (Lond.), 1893.
Fisher, Walter, L.R.C.P. (Edin.), 1892; L.R.C.S. (Edin.), 1892; L.F.P.S. (Glasg.), 1892.
Mallinckrodt, Konrad, State Exam., Certif. Tübingen, 1902.
McArthur, Alexander Christie, M.B., C.M. (Glasg.), 1892.
Stephens, Henry Zouch, L.R.C.P. (Lond.), 1900; M.R.C.S. (Eng.), 1900.

For Additional Registration:

Sharp, Granville Gilbert, M.Ch. (Syd.), 1904.

QUEENSLAND.

Godsall, Robert Spencer, M.B., M.Ch. (Syd.), 1904.
Grindrod, William Campbell, M.B., B.S. (Melb.), 1903.
Harris, John James, M.B., B.S. (Aberd.), 1903.

BIRTHS, MARRIAGES AND DEATHS.

BIRTHS.

DAWSON.—April 14th, at Berry, Shoalhaven, N.S.W., the wife of Dr. C. L. Dawson—a son.

DIGHT.—May 3rd, at Riverstone, N.S.W., the wife of Wilfred B. Dight, M.B., Ch.M.—a daughter.

DEVITT.—April 21st, 1904, at her residence, Ravenswood, North Queensland, the wife of Richard E. Devitt, M.B., B.Ch., B.A.O., R.U.I., J.P., Surgeon District Hospital, etc.—a daughter.

GODFREY.—April 4th, at "Ingomar," Punt-road, Prahran, Melbourne, the wife of Clarence G. S. Godfrey, M.R.C.S. (Eng.), etc.—a son.

LIPSCOMB.—At "Woolton," Leichhardt, Sydney, on May 6th, 1904, the wife of T. W. Lipscomb, M.B., Ch.M., of a son.

LUKER.—May 5th, at 183 Liverpool-street, Hyde Park, Sydney, the wife of Dr. Donald Luker—a son.

WADE.—March 22nd, at "Sparnon," Stanmore, Sydney, the wife of Dr. R. B. Wade—a daughter.

WAUGH.—April 22nd, at Boonah, Queensland, the wife of Dr. H. G. Waugh—a daughter.

MARRIAGES.

BUTLER—TRELEAVEN.—On March 12th, at Claremont, W. Australia, Frederick Stanley Butler, M.A., M.B., B.S., of Beverley, W.A., second son of the late Charles John Butler, South Australia, to Ethelwyn Treleaven, only daughter of Nicholas Treleaven, South Australia.

FLASHMAN—DEWAR.—At Edinburgh, on the 11th March, James Froude Flashman, M.D., B.A., B.Sc., University of Sydney, to Irene Flora, daughter of James Dewar, M.D., F.R.C.S.E., Drylaw House, Mid-Lothian.

McLEAN—NIXON.—On the 26th April, at Melbourne, Thomas Alexander McLean, M.B., Ch.B., of Traralgon, Victoria, to Olive Maud, eldest daughter of Thomas Nixon, of South Melbourne.

MOGER—WETHERELL.—On April 6th, at Parramatta, N.S.W., Frederic Robert, son of the late Frederic Slade Moger, M.R.C.S., L.R.C.P. (Eng.), of Carshalton, Surrey, Eng., to Eleanor, youngest daughter of the late Benjamin John Wetherell, M.R.C.S. (Eng.), and Mrs. Wetherell, Neutral Bay.

NISH—THWAITES.—On the 29th March, at Mansfield, James Alexander David Nish, M.B., Ch.B., Benalla, Victoria, youngest son of the late Rev. James Nish, D.D., of Bendigo, to Vans Victoria, youngest daughter of Mrs. Thwaites, Mansfield, Victoria.

DEATHS.

FULTON.—May 1, at Crimea-street, St. Kilda, Melbourne, John Fulton, M.D., aged 64 years.

PERRY.—April 24th, 1904, at Summer Hill, Sydney, Michael Perry, M.R.C.S.E., late of West Wyalong, aged 61 years.

BOOKS RECEIVED.

Surgical Notes from Four Continents and the West Indies. By Nicholas Senn, M.D., Ph.D., L.L.D., Rush Medical College, Chicago.
The Medical Annual, a Year-Book of Treatment and Practitioners' Index. Bristol: John Wright & Co. 1904. Price, 6s 6d net.
Medical Monograph Series No. II.: The Bacteriology of Every-Day Practice. By J. O. Symes, M.D. (Lond.). 2nd edition. 1904. London: Baillière, Tindall & Cox. Sydney: L. Bruck.
Transactions of the Sixth Session Intercolonial Medical Congress of Australasia, held in Hobart, Tasmania, February, 1902. Edited under the direction of the Literary Committee by Gregory Sprott, M.D.
Eighth and Ninth Fasciculi of the Atlas of Clinical Medicine, Surgery, and Pathology. Eruptions due to Arsenic, Urticaria Pigmentosa, Leprosy. The New Sydenham Society: Mr. Lewis, 136 Gower-street, London.
Transactions of the Association of American Physicians. Vol. XVIII. Philadelphia: Dornan. 1903.

LETTERS AND OTHER COMMUNICATIONS RECEIVED FROM CORRESPONDENTS:—

Dr. M. C. Lidwill, Ballarat; Dr. P. Blackall, Queanbeyan; Messrs. Parke, Davis and Co., Sydney; Reuter's Telegram Co., Ltd., 359 Collins-street, Melbourne; Messrs. Burroughs, Wellcome & Co., Sydney; Dr. E. S. Hawthorne, Mudgee; Dr. Francis Hare, Brisbane; Dr. T. Storie Dixson, Sydney; Dr. W. N. Robertson, Brisbane; Dr. E. C. Hall, Parramatta; Dr. T. G. Beckett, Melbourne; Dr. A. B. Brockway, Brisbane; Dr. Lockhart Gibson, Brisbane; Dr. Halford, Brisbane; Dr. Hogg, Launceston; Mr. David Fell, Sydney; Dr. E. Hirschfeld, Brisbane.

AUSTRALASIAN MEDICAL GAZETTE.

AN INTRODUCTION TO MODERN THEORIES OF IMMUNITY.

By **D. A. Welsh, M.A., M.D., Professor of Pathology, University of Sydney.**

Part III.

Concerning agglutinins and precipitins.—Among the substances called forth by the entrance of bacteria within the living body are the agglutinins which have the property of agglutinating and clumping bacteria of the type concerned in their production. But the phenomenon is a general one, since agglutinins are developed in connection with non-motile as well as with motile forms, and in connection with cells other than bacteria, many hæmolytic sera being also agglutinative towards the corresponding hæmocytes. The very remarkable bodies, known as precipitins, are developed by the introduction within an animal of certain albuminous fluids, including blood serum, milk, the white and yolk of egg, and bacterial culture media, and their action is shown by the production of a turbidity or precipitate when the serum of the animal thus treated is added to the albuminous fluid that called them forth. It is convenient to consider both substances together, since they are in many respects similar, though, so far as we know, not identical, and since the processes of agglutination and precipitation appear to depend ultimately upon similar intermolecular reactions.

In this relation we must recall what we have already said regarding Ehrlich's theory of cell nutrition and its bearing on the intermolecular reactions concerned in processes of antagonism. When nutritive molecules of simple constitution are presented to certain cells, they are taken up by simple cell-receptors equipped solely with one haptophore group. These constitute Ehrlich's receptors of the first order. They are concerned in the fixation of molecules of simple toxin, and when liberated from the cell form molecules of antitoxin. We have seen that, in the actual bodily presence of bacteria and other alien cells, other and more complex cell-receptors are required. They constitute Ehrlich's receptors of the third order, and possess two haptophore groups, one capable of union with molecules of the alien cell, the other capable of linking a destructive (or digestive) complement to them. When discharged from the cell, they form the intermediate bodies concerned in processes of bacteriolysis, hæmolysis, and cell-disintegration in general. But other molecules of food may present difficulties of assimilation intermediate between those presented by molecules of the class of simple toxins and those presented by molecules of alien cells. They may be incapable of direct assimilation by the cell, but the requisite preparation or digestion may be accomplished by molecules of the cell itself without the intervention of a separate complement. For this purpose Ehrlich assumes that cell-molecules are furnished with receptors of the second order. Such receptors possess one unsatisfied affinity of the haptophore type capable of fixing the nutritive molecule, but in addition they possess, as part of their structure, a destructive or ferment-like atom-group, capable of preparing the molecule for assimilation and comparable with the toxophore group of the complement. In suitable circumstances they, too, may be formed in excess and discharged from the cell. Now it is found that agglutinating and precipitating sera can be rendered inactive by heat, but cannot have their activity restored by the addition of the corresponding natural sera. Hence agglutinins and precipitins may be regarded as free receptors of this class. Each possess one combining affinity capable of uniting in the one case with the agglutinable substance of the appropriate cell, in the other case with the precipitable substance of the appropriate albuminous molecule. Each possesses in addition an atom-complex of the toxophore order, representing the agglutinating group of the agglutinin and the precipitating group of the precipitin respectively. But the agglutinating atom-group is unable to act until the agglutinin has, through its haptophore group, entered into combination with the corresponding agglutinable substance. This extremely superficial statement, however, gives little idea of the obscure and complex phenomena concerned in the ultimate mechanism of agglutination and precipitation, though, for our present purpose, it must suffice.

Other facts are known regarding them comparable to some extent with those already considered in relation to toxins and bacteriolysins. In all anti-bodies, so far as is known, the atom-complex of the toxophore order is less stable than that of the haptophore order, and tends to lose its power of affective action. Hence toxin degenerates to toxoid, complement to complementoid, agglutinin to agglutinoid, and precipitin to precipitoid. In this degenerate state agglutinoid is still capable of combining with the agglutinable substance of susceptible bacteria, though incapable of producing agglutination. Indeed, by engaging the molecules of agglutinable substance, it can protect bacteria from the action of agglutinin and thus inhibit agglutination. Since agglutinins, and at a later stage agglutinoids, may be formed in culture media, an important source of error is apparent. In like manner precipitoids may inhibit preciptation. In certain conditions there have been found anti-agglutinin, though not bacterial anti-agglutinin, and anti-precipitin which are capable of neutralising the corresponding agglutinin and precipitin, and again of inhibiting the respective phenomena, though for a different reason.

It is important to note that, as a general rule, the development of agglutinin in an immune serum proceeds along with that of intermediary, nevertheless, the agglutinative power of a serum bears no necessary relation to its bactericidal value. Indeed some remarkable divergences exist. Sera may be prepared which are agglutinative, but not bactericidal, and others which are bactericidal but not agglutinative. Similar contradictions obtain in regard to natural sera. The natural serum of the rat, which is susceptible to anthrax, is bactericidal but not agglutinative to anthrax bacilli, while the natural serum of the insusceptible dog is agglutinative but not bactericidal (Ritchie). A patient dying of typhoid fever, presumably from exhaustion of bactericidal capacity, may have a powerfully agglutinative serum, and the serum of a convalescent may give only a slight reaction. The relation of precipitin to hæmolysin is equally indeterminate.

The practical interest of agglutinins and precipitins centres round the question of their specificity. Like all other anti-bodies they are directed specially against the particular form of substance that called them forth, but they appear to have a wider range of effective action and are less rigorously specific. The elaborate researches of Nuttall, embodying the results of 16,000 precipitin tests, have done much to determine the nature and limits of this specificity, and have incidentally revealed a most interesting series of blood relationships in the animal kingdom. Two illustrative examples may be taken. When a rabbit receives repeated injections of horse's blood, then its serum begins to develop a precipitin, which produces its maximum effect only on horses' blood. It also produces a distinct but less marked effect on other equine bloods (zebra and donkey), an insignificant effect on the blood of some other ungulates (ox and sheep), and a negative effect on all other animals tested, including other mammals. Similarly a precipitin prepared against human serum gives a maximum precipitate only with human blood, a marked reaction with that of the anthropoid apes (Simiidae), a less marked reaction with that of the baboons (Cercopithecidæ), a negligible reaction with that of other monkeys (Cebidæ and Hapalidæ), and a negative reaction with that of the lemurs (Lemuridæ) and all other animals tested, including mammals. When, however, the precipitin was tested in stronger concentration, the reactions were less defined, and precipitates were obtained with blood from lemurs and some other mammals. Hence the precipitin test may be of great value in determining the nature of blood-stains in medico-legal cases (Nuttall) just as the agglutinin test may assist in distinguishing bacterial species.

These facts have a most important bearing on the vexed question of the specificity of the agglutinins. It is now known that, like the precipitins, they are not strictly specific and that the limits of their specific antagonism are governed by like principles. An anti-typhoid agglutinin, prepared by immunisation against one strain of typhoid bacilli, produces its maximum effect, not against typhoid bacilli in general, but against the special strain employed in its preparation. It can, however, agglutinate other strains of typhoid bacilli, though less powerfully. When used in suitable dilution, an agglutinin prepared against one bacterial species will not agglutinate other allied forms, but in concentrated solution it may. These facts, together with the possible presence of agglutinin or agglutinoid in the culture medium, and the possible absence or poverty of agglutinin in the immune serum, emphasise the need for caution in interpreting the results of the test.

Nature and limits of specific antagonism.—It is important to emphasise the fact that all these inter-molecular reactions are specific. A given toxin introduced within the body of a living animal calls forth an antitoxin which is capable of neutralising that toxin, and, as a rule, that toxin alone. A given bacterium, in similar circumstances, calls forth a host of anti-bodies (lysins, agglutinins, etc.) which affect these bacteria, and, as a rule, these bacteria alone. But, though many anti-bodies appear to be absolutely specific, others, as we have seen, are only relatively specific. In general terms we may say that the anti-body, developed by immunisation with albuminous molecules in cellular form or otherwise, is specially directed against molecules identical with those that stimulated its production, but may manifest a lesser antagonism towards other closely related molecules. The relationship in question is a biological relationship usually of so subtle a nature as to wholly elude expression in terms of known chemical and physical data. It is impossible, for example, by any chemical or physical process to recognise a distinction between the hæmocytes or the sera of most allied species, and yet they may usually be distinguished with certainty by means of their specific hæmolysins or precipitins.

Ehrlich's theory practically comes to this, that the mechanism by which the animal body protects itself against, or reacts to, alien cells and certain substances is in reality an adaptation of its nutritive or metabolic mechanism. But he assumes that tissue cells possess an indefinite number of fixed receptors, and that an invading molecule elicits an anti-body simply because it possesses an affinity capable of satisfying one particular form of cell-receptor and no other. He further assumes that this is a purely accidental coincidence, and presupposes that there already exists another molecule (a nutritive molecule) with an absolutely identical affinity for which this particular cell-receptor is specially designed. Every alien molecule capable of originating an anti-body is thus assumed to have a nutritive double. Now we cannot certainly trace the origin of all anti-bodies, but there is evidence that bacteriolysins and hæmolysins are formed from leucocytes, whether from the same or from different leucocytes is immaterial to our argument. We are, therefore, asked to assume that a leucocyte is equipped with an indefinite number of very definite nutritive receptors, which by a remarkable coincidence also possess affinities for atom-groups of every pathogenic bacterium, of every species of hæmocyte, and probably of many other alien molecules. The coincidence is certainly remarkable, and there is this further objection that, if one receptor out of an indefinite number becomes engaged with an alien molecule, the damage to the cell economy would be negligible, and the necessity for the renewed regeneration of similar receptors is not very urgent. The presumption of a rigid arrangement of the atom-complexes that constitute nutritive receptors, the consequent assumption of an indefinite number of different receptors in relation to one kind of cell, and the further assumption of an equally indefinite number of accidental coincidences between affinities of alien molecules and affinities of nutritive molecules, make it difficult to reconcile this aspect of the theory with the known facts of specific antagonism.

Nor is it easy to give any very satisfactory explanation. We must remember, however, that it is the reaction of living matter that is in question. It is not unreasonable to suppose that living cells are capable of subtle adaptations to meet the unceasing changes in their environment, and in particular that a living cell is capable of adjusting its receptors in accordance with an external stimulus, in other words, of rearranging its atom-complexes to correspond with those of an encountering molecule. But the cell-receptors will not receive every molecule presented to them, only those for which they can be adapted. Within these limits, however, there may be an indefinite number of possible rearrangements, and hence a corresponding number of different, though closely related, molecules with which they may combine. In a quiescent state the cell-receptor is capable of an infinite number of atom-groupings, but the particular form assumed at any one time will be determined by the special affinities of the molecules presented to them. When a number of receptors are engaged with molecules of one kind, it may be that the cell is rendered incapable of further rearrangement of its receptors for molecules of another kind, and all the more likely is this to occur if the engaging molecules are of somewhat unusual constitution, as in the case of toxins and bacteria. The receptors then become useless. But what is regenerated to make good the loss? Apparently not receptors (atom-complexes) possessing all their original capacity for rearrangement, but only atom-complexes identical with those engaged by the alien molecule; at all events only the latter are cast off as the specific anti-bodies. The regenerated receptors thus have impressed upon them the specific limitations and affinities for which they were originally adapted by the vital reaction of the cell in presence of the alien molecule. After all, this is no explanation, only a restatement of what we know must take place, but it makes the development of anti-bodies depend, not upon an accidental identity, but upon an essential relationship, and yet a difference, between affinities of alien and of nutritive molecules, and the greater this difference, so long as the living cell can adjust its receptors for engagement, the more restricted the limits of the specific antagonism.

Therapeutic Indications.—It is comparatively easy to render an animal immune to the action of a toxin or a bacterium; it is difficult to transfer this immunity to an already infected animal. Protection is better than cure. In dealing with tetanus antitoxin we saw that there were theoretical reasons for anticipating the failures that have unfortunately been too often realised in fact, and we are now in a position to understand why treatment of our second group of bacterial diseases, in which protection has to be sought specially against the bacteria themselves, and where, therefore, anti-microbic sera are required, should be still more unsatisfactory and uncertain. In the destruction of bacteria two bodies are concerned, the intermediary and the complement, and, since there are three chemical affinities, all of which must be satisfied before any bactericidal action can take place, the chances of failure are increased. It must also be borne in mind that the bactericidal complement is not a ferment. It is not capable of indefinitely originating destructive processes without sensible loss; on the contrary, it becomes used up together with the intermediary; in other words, there must be a certain quantitive relation between intermediary and complement in order to produce a maximum effect.

We have seen that in processes of immunisation the development of intermediary proceeds more rapidly than that of complement, so that an immune serum rarely or never contains a sufficiency of complement to render effective the excess of intermediary. Moreover, on being kept, the relatively unstable complement tends to degenerate and ultimately to disappear (Ainley Walker), so that an immune serum, withdrawn from an animal, rapidly loses its little store of complement, or complementoid may be formed. Now complementoid bears the same relation to complement as toxoid does to toxin; that is to say, the relatively unstable destructive, or toxic, affinity has degenerated, while the more stable combining affinity has persisted. The effect of introducing complementoid along with intermediary into an infected animal might be that some of the bacterial receptors would become engaged, through the intermediary, with molecules of complementoid, which, having lost their destructive atom-groups, would be harmless, and, in proportion to the number of receptors thus engaged, the bacteria would be protected against the action of the true complement. Since, however, the combining affinity of the complement is usually also lost or impaired, an anti-microbic serum may for clinical purposes be regarded as devoid of complement and simply as containing an excess of intermediary. The complement, therefore, must be supplied by the patient.

Now the patient might possess enough complement to effectively destroy all the invading bacteria, and yet the therapeutic action of the immune serum might be frustrated (1) by the unsuitability of the intermediary introduced, or (2) by its defective or excessive quantity.

(1). That the intermediary of the immune serum might not be adapted for linking a natural complement of man to the infecting bacteria is readily intelligible when we recall the narrow limits within which specific anti-bodies react. Fortunately, however, although the intermediaries of anti-microbic sera appear to be almost absolutely specific as regards their capacity for union with bacteria, an anti-typhoid intermediary being unable to replace an anti-cholera intermediary, yet they are capable of linking to the susceptible bacteria more than one effective complement, at all events an effective complement from more than one kind of animal. But, though complements from several different sources may be effective, they are not all equally effective. A lock may be opened by several keys, but its own key fits it best (Fischer). As a rule the specific intermediaries of an immune serum have a maximum affinity for the complements of animals of the same species as that in which the immune serum was developed, and may have little or no attraction for the complements of unrelated species. But most anti-microbic sera are obtained from animals unrelated to man except through general mammalian attributes. It is not surprising, then, that their intermediaries should occasionally fail to combine with human complements or should combine only incompletely.

(2). That too little immune serum, involving a deficiency of intermediary, should fail to cure is readily intelligible, but that too much serum, involving an excess of intermediary, should do more harm than good is not at first sight obvious. But the fact is beyond question. For, on testing the effect of varying amounts of intermediary upon quantities of complement and of bacteria as nearly as possible constant, Neisser and Wechsberg found that up to a certain point all the bacteria were not destroyed, the intermediary being in defect. With increasing amounts of intermediary, complete bacteriolysis occurred, but, beyond a certain limit, excess of intermediary produced again an incomplete reaction, the bacteria escaping destruction. This phenomenon is open to various interpretations. If more intermediary be introduced than can be engaged by the bacterial receptors, then, assuming that the complement is evenly distributed among the intermediaries, some of the available complement will be taken up by disengaged intermediaries, and only a small portion may find itself linked to bacteria. If, again, the complement have a greater affinity for a free intermediary than for one already engaged with a bacterium, then excess of intermediary should be still more harmful. The general trend of experiment, however, is to indicate that complement does not unite with intermediary until the latter has become engaged with susceptible cell-receptors, or at least that complement has a greater affinity for attached than for free intermediary. How, then, can excess of intermediary be hurtful ? To understand this we must refer to certain observations regarding hæmolytic sera.

Since the phenomena of hæmolysis can be studied in test tubes, it is possible to determine with remarkable exactitude the quantities of the various bodies concerned. For example, the exact amount of intermediary and of complement required to completely hæmolyse a given quantity of corpuscles may be ascertained, and this may be termed the minimum hæmolytic dose. But the combining affinity of intermediary for hæmocytes is not comparable with that of an acid for an alkali. A given quantity of hæmocytes may take up many times the minimum hæmolytic dose of intermediary, the excess to some extent being determined by the amount of intermediary available (Ehrlich and Morgenroth). In such circumstances, when the hæmocytes have combined with several times the minimum hæmolytic dose of intermediary, the amount of complement that that can be taken up by them is also correspondingly increased, and, when the hæmocytes are fully saturated with intermediary, the total amount of complement that can be neutralised in their hæmolysis is excessively and disproportionately increased (Muir). In other words, an excess of intermediary leads to a disproportionate wasting of the complement, and in all probability this statement is also applicable to the phenomena of bacteriolysis (Muir). In presence of excess of intermediary the bacteria would then take up many times the minimum bactericidal dose, and, unless complement were present in even greater excess, some bacteria would be acted on by more complement than was necessary for bacteriolysis, whereas others would escape. Hence the complement may be sufficient, if properly distributed, to produce complete bacteriolysis, and yet the patient may succumb from an overdose of the immune serum. In the administration of anti-toxic sera, on the contrary, excessive doses are indicated in order to elicit the maximum therapeutic effect. But, in our present state of knowledge, or rather of ignorance, extreme caution is necessary in the use of anti-microbic sera.

As another objection to the use of immune sera in large doses must be mentioned the possible development of anti-immune bodies. Although anti-antitoxin is unknown, both anti-intermediary and anti-complement may be produced, and the more distant the relationship between the immune and the infected animal, the more likely are they to be formed, probably not after a single dose of the immune serum, but possibly after several.

The intermediary of the immune serum may be eminently suitable; the dose may be so regulated as to elicit the maximum effect of the available complement; yet the patient may die from defect of complement. It is apparently hopeless in the meantime to look for an artificial source of complement unless from the transfusion of an identical blood, that is, from a healthy to an infected person. Artificial increments of complement have been produced in animals by the introduction of substances which stimulate leucocytosis, but for practical purposes all that we can do is to husband the natural store of complement by the maintenance of good health and by good feeding. The influence of feeding is well shown by contrasting the bactericidal power of the blood in breast-fed and in bottle-fed infants, the former being more than twice as powerful as the latter (Moro). On the other hand, the gradual disappearance of complement in conditions of malnutrition may be correlated with the frequency of terminal infections, and the general exhaustion of the complement in many infective diseases may predispose to relapses and to subsequent infections. The action of various poisons, including phosphorus and alcohol, may also diminish the complement-content, and the readiness with which alcoholic subjects succumb to pneumonia and to other infective diseases is probably directly traceable to this cause.

The possible therapeutic value of protective inoculation by vaccines has been emphasised by Grünbaum. Vaccines, of course, contain, not the anti-bodies of immune sera, but substances which can stimulate the production of anti-bodies. They are, therefore, essentially preventive and not curative. But vaccination is not immediately protective. The first effect may be a transitory diminution of resistance. For the cell-receptors, being engaged with vaccine-molecules, are liable to be overwhelmed by any immediate great increase of toxic substance, so that the vital reaction on which depends the development of anti-bodies may not take place. Hence, for example, inoculation with anti-typhoid vaccine should be performed some weeks before the anticipated exposure to infection. But, in the course of an infective disease, the introduction of a vaccine may be beneficial, since the invading bacteria may have destroyed or impaired the reaction of the tissues in which they have lodged to such a degree that anti-bodies are no longer produced by them, and yet there may be other tissues capable of forming anti-bodies but not stimulated by the bacteria. The injection of the vaccine might be successful in producing a reaction in such intact tissues and materially contribute to the development of bactericidal bodies. The lesions of typhoid fever and of tuberculosis, for example, involve extensive local necrosis of tissue, in which the bacilli are concentrated, and dead or devitalised tissues are obviously incapable of further reaction. Hence the introduction of the less virulent anti-typhoid vaccine, or of tuberculin, may be of value in tapping some source of anti-bodies not yet exhausted. It is hardly necessary to add that such treatment should not be undertaken without a full appreciation of its attendant perils, and, in particular, of the risk of reinforcing the original infection.

Other theories of immunity.—Other theories of immunity are essentially modifications and adaptions of the dominant theory of Ehrlich, and of these the chief have been suggested by Bordet, and by Metchnikoff. Bordet, recognising the difficulty of explaining the interaction of intermediary and complement with susceptible cells in terms of simple chemical laws, does not admit that the intermediary can act as a chemical bond of union between complement and cell. On his view the intermediary acts as a mordant which prepares or sensitises the cell for the reception and action of the complement. Moreover, while admitting specific differences among intermediaries, he does not recognise, as Ehrlich does, corresponding specific differences among complements. Metchnikoff, who for many years has strenuously upheld the phagocytic theory of immunity, now with much ingenuity and resource traces the origin of Ehrlich's anti-bodies to phagocytic cells. It would take too long for us to follow the brilliant work of Metchnikoff and of the many other observers who support this hypothesis; we must be content to indicate that certain leucocytes appear to be the main source of bactericidal substances. Metchnikoff holds that the intermediaries of an unimmunised animal are confined within its phagocytes, but that during immunisation some of the excess of intermediary is found free in the plasma. Complement, on the other hand, he maintains, is found only within phagocytes, unless it be liberated by disintegration of these cells. Hence bacteriolysis, and the dissolution of alien cells in general, takes place only within appropriate phagocytes. Since, however, in most infections phagocytes are abundantly broken down, and presumably, therefore, bactericidal bodies liberated, it seems unnecessary to insist, as Metchnikoff does, that processes of cell-destruction are essentially intra-cellular.

These matters of detail are insignificant beside the fact that Metchnikoff's theory corroborates, from an entirely different point of view, the principle, which we have already emphasised, that bacteriolysis is but a particular application of a general biological process, the reaction of the living body to foreign cells and certain substances, and that this process in turn appears to be only a specialised act of nutrition. In the lower forms of life digestion and protection are effected by the same cell, and indeed phagocytosis is identical with one aspect of digestion. In process of evolution, however, the digestive functions appear to have been relegated to specialised hypoblastic cells of the alimentary tract, while leucocytes and certain other cells have been set apart for protection against those alien cells to invasion by which the animal body is continually exposed. Even in the higher animals, however, this differentiation must be stated with reservation, since, having regard to the leucocytosis of digestion, we must admit a possible digestive function of leucocytes. Besides their highly practical bearing, modern theories of immunity have thus the greatest scientific interest from the suggestions they offer regarding the ultimate mechanism of many chemical, biological and physiological phenomena, including complex inter-molecular reactions, and processes of cell-nutrition and protection, both of which must be incessantly maintained in every living organism from the lowliest to the highest.

Addendum.—I am not aware of any word in the language that has a connotation equivalent to "anti-body," which exactly expresses the idea to be conveyed, but is most objectionable as a hybrid. The terms "antidote" and "antagonist" have too definite and particular a reference. My colleague, Professor Woodhouse, however, has kindly suggested the word "antion" from the Greek, ἀντίος. In the sense merely of "something opposed to, or directed against," the term "antion" would be the exact equivalent of "anti-body," and appears to meet a real want. But in a paper that was designedly introductory I hesitated to embody a newly-coined word.

Maori Treatment of Pulmonary Consumption.—According to a statement in the *Sydney Morning Herald*, a curious instance of the methods resorted to by the Maori tohunga or doctor has occurred at Rangitikei, N.Z. The evidence given at an inquest showed that deceased had suffered from pulmonary consumption, and the treatment given by the tohunga was seven hot baths. The patient was also steamed in a Maori oven made by digging a hole in the ground and filling it with hot stones and herbs. Mats were placed over these, and the patient was covered with six blankets, and kept there for nearly an hour. The jury recommended that the Government should suppress the tohunga treatment.

CEREBRAL HYDATID—REMOVAL BY OPERATION—RECOVERY.

By J. C. Verco, M.D., M.D., B.Sc., F.R.C.S., and B. Poulton, M.D., etc.

Medical History by Dr. J. C. Verco, Adelaide.

Miss A. R., aged 17 years, a domestic servant, born in the State, was admitted to "Alexandra" ward in the Adelaide Hospital in December, 1903, complaining of right hemiplegia. She had been under the care of Dr. J. B. Gunson, who has kindly furnished notes of her case until her admission. On June 30th, 1902, he passed her for entrance to a lodge. At that time she was rather thin and slightly anæmic. Though 15 years and 2 months old, her menses had not appeared. She had had measles and frequent sore throats. No family history was obtainable. She had been an orphan since seven years of age. She was sound. On June 9th, 1903, she saw him, and complained of "bilious attacks," which began with malaise, constipation, and headache, followed by nausea and vomiting. Her menses had been irregular for a few months. She looked fairly well, and was not anæmic. Seemed languid, and was very reserved (she had always been rather quiet and silent), but was quite intelligent. She said her right hand felt weak at times, and she could not always write with it, and was liable to drop things. Her arm felt affected at times. Urine was acid, 1012, and contained no albumen.

July 11th, 1903.—The bilious attacks had continued. Some impairment of power was detected in the right arm and forearm, the muscles were not wasted, but the hand was bluish-red in colour, and, objectively as well as subjectively, colder than the left.

July 18th, 1903.—She had a fit at 2 a.m., in which she threw her arms and legs about and passed urine involuntarily. Her right foot was cold at night.

July 29th, 1903.—Knee jerk was distinct on the left side, and almost clonic on the right.

August 10th, 1903.—Had another fit. She had been bilious for two days, with a general headache ; then vomited and felt drowsy, and suffered from headache over the left eyebrow just before the fit. She felt a strange sensation in the right arm. and cried out that a fit was coming ; then the right arm began to twitch and she became unconscious. The convulsions became general, but were most marked in the right arm and leg. Afterwards she was semi-conscious and drowsy, with a general headache.

September 9th, 1903.—Had had a few slight headaches and two "bilious attacks," with severe general headaches and nausea. Menses were overdue; bowels regular. The left side of the face seemed more expressive than the right. The right leg seemed, perhaps, rather colder than before. Sensation was unaffected.

September 30th, 1903.—She had had a fit at 2 a.m. a week previously, which began like a nightmare, and which left some temporary indistinctness of speech. Her temperature, taken night and morning for a week, was always normal.

November 11th, 1903.—She was dragging her leg, and could not raise her arm. Menses at six weeks' interval.

December 7th, 1903.—Her speech was thicker. She was more helpless and dull. Seemed to have a slight squint at times. Hardly able to walk.

December 9th, 1903.—Had a fit. Sent to the hospital. When admitted she was a well-nourished girl, with a normal temperature; pulse, 92 and regular, with no affection of the heart, lungs, liver, or spleen, or kidneys. She had considerable paralysis of the right side of the face and of the right arm and leg, without any affection of sensation. The knee jerks were not elicited; ankle reflex was obtained on the left side, but not on the right, and plantar reflex was doubtful on both sides. In both eyes the optic discs were enlarged and swollen, with frayed margins, and the vessels very much obscured in the discs. No bulging of the skull or tenderness or abnormal percussion note could be found. She said her fits always began in the right hand and travelled up her arm, and went to the leg and right side of the face before she lost consciousness. She had never known the jerkings to occur without subsequent loss of consciousness. She had had bad headaches almost incessantly, and had been giddy at times, but had not vomited. She had had no otorrhœa and no chronic nasal discharge. The right hemiplegia indicated disease of the left hemisphere, the associated fits a cortical lesion, their commencement in the hands a focal trouble in the arm centre, the choked discs a probable tumour. As (considering her age) it might be a hydatid cyst, she was transferred to the ward of Dr. Poulton, the corresponding surgeon, to be trephined over the left-hand centre for exploration and for removal of the tumour, should one be found.

When seen on April 22nd, after her return from the Convalescent Home, there was no detectable loss of power in the right face, arm, or leg. She could not stand on the right leg quite so securely as on the left. The plantar, patellar and ankle and elbow reflexes were equal on the two sides, and normal. The retinal veins and arteries were normally distinct, as were also the margins of the optic discs, which seemed, however, somewhat too white. There were no hæmorrhages or white spots on the fundus. Her vision was perfect in the left eye; she could read No. 1 Brilliant at eight inches. In the right not quite so good; at five or six inches' distance. Mentally, she was quite intelligent and quick. But for the questionable atrophic condition of the optic discs, and the barely noticeable insecurity when standing on the right leg, no disability remained from her hydatid.

A severe accident to the right side of her lower lip some years ago, which left a long horizontal and vertical scar, gives an appearance of weakness to the outer half of her mouth on the right side, but this is purely traumatic.

Surgical History by B. Poulton, M.D., M.R.C.S., etc., Adelaide.

This patient was transferred to my ward by Dr. J. C. Verco, with a view to operation, and her condition was found to be that described by him. In consultation with Drs. Verco, Giles, and Cavenagh-Mainwaring it was decided to operate and explore the motor area of the right upper extremity. In the ten days immediately preceding operation there were three convulsive "fits," and vomiting occurred irregularly. There was considerable physical and mental prostration, with much headache and some vertigo. The general nutrition of the body was fairly good. After two days' careful and prolonged preparation of the scalp, one-sixth of a grain of morphia was injected hypodermically and under ether anæsthesia, after measuring for the fissure of Rolando, the skull was punctured through the scalp to mark its lower extremity, and then a very large semilunar flap of scalp and pericranium was turned down, freely exposing the left lower parietal and upper temporal regions. An inch trephine removed a disc of bone about three-quarters of an inch behind the coronal suture, in front of and above the lower extremity of the fissure of Rolando. The bone was not thinned. The dura was tense and bulged outwards. A semilunar incision allowed the dura to be reflected, and on inserting a fine hollow needle about a quarter of an inch, clear fluid was ejected with force. About 2½ drachms were collected in a test-tube, and much more escaped. A few white particles were at once seen in the collected fluid, and the microscope demonstrated them as the suspected scolices. There was now less prominence of the brain surface. The needle was withdrawn, sutures inserted to fix the dura mater, and the circular opening in the skull was filled by a sterile pad of iodoform gauze to maintain some degree of pressure under the replaced scalp flap. A cotton wool pad, wrung out of perchloride solution, was bandaged firmly over all.

The temperature fell to 96° shortly after the operation. A pint of hot saline solution was inserted into the rectum, and a good recovery followed during the evening, there being no ether vomiting. An ice cap was used as persistently as possible during the first few days, and later, when the febrile condition was more marked. Headache and restlessness, with a much varying pulse, were noted during the two first days, and œdema of the face became so considerable as to close the eyes. On the fourth day abdominal pain and vomiting occurred and the temperature rose; so it was determined to remove the cyst without waiting a week, as was first intended.

Under ether and morphia anæsthesia, Dr. Cavenagh-Mainwaring assisting, and Dr. Verco and others being present, the brain was again exposed, and 1½ oz. of clear fluid allowed to escape through a fine trochar. The brain was incised with a tenotome, and a further quantity of clear hydatid fluid evacuated. The brain tissue cut through in reaching the cyst was not thicker than one-sixteenth of an inch. A finger inserted felt loose blood clot and the collapsed sac, which was withdrawn by toothed forceps. The cavity, measuring 4 in. in depth, was gently irrigated with hot saline solution, and on turning the head to the left for facility of irrigation, the divided cortex fell in like a trap-door. Gut sutures were inserted in the dura edges, and the scalp replaced and sutured, leaving an opening for a narrow oiled silk drain from the trephine opening; a moist perchloride gauze dressing was bandaged on firmly.

At the commencement of the operation the pulse was 120; after aspiration it was 168. At the close the pupils were equal and contracted. On the succeeding evening the temperature attained its maximum of 104.8°, and twitching of the right hand was noted. She complained of headache and abdominal pain, and was slightly delirious at times. There was no vomiting after the operation. The catheter was needed now, and irregularly for the next two weeks. During the first week the temperature was very erratic, ranging between 100° and 104°. Ten-grain doses of phenazone were given whenever cold affusion seemed insufficient to reduce the temperature.

For this period there was much headache, frequent and severe abdominal pain, and very great œdema of the face and scalp. A herpetic eruption, which was well established in the right eyebrow at the time of the radical operation, became septic, and terminated in a limited gangrene of the contiguous skin. This, with a herpes of the lip and mouth, caused much irritation, and was treated throughout with every antiseptic precaution.

During the second week the febrile condition subsided, headache and abdominal pain gave little trouble, and the mental condition presented marked improvement; and then the cystitis, which had been checked by boric irrigation and urotropine, seemed chiefly responsible for another week's fever, in which the temperature ranged from normal to 102.2°. The mental condition, however, slowly improved, appetite increased, and occasional clonic movements of the right hand and face were noted.

The facial œdema, which was accompanied by a mucopurulent discharge from under the œdematous eyelids, subsided very slowly. Once, during the period of cystitis and 11 days after operation, there was repeated vomiting. Eighteen days after removal of the cyst, 21 days after exploration, voluntary movement of the fingers was noted, and on the 23rd day plantar reflexes were present, but the patellar reflex was not elicited; and although there was now no oozing from the drain aperture, which had closed, cerebrospinal fluid was evacuated from under the distended scalp by a hypodermic syringe. The patellar reflex was obtained on the 30th day, and within a week she could hold a book and read and remove a fairly tight bracelet from the left arm. Owing to the septic herpetic ulceration of the eyebrow, very careful separate dressing was carried out. Free cerebro-spinal oozing along the drain necessitated frequent dressing, and after the removal of the drain and closure of the aperture, the same fluid continued to accumulate under the flap, and was evacuated by tapping.

Cyanide gauze wrung out of perchloride lotion was used as a dressing and pressure pad, and I found loose woven bandages wrung out of lotion enabled the firmest pressure to be applied. Throughout, the greatest pressure possible was exerted over the wound area, and towards the end a large sheet lead plate was incorporated in the dressings. So long as cerebro-spinal fluid escaped from the orifice under the uniting flap, strong pulsation was felt over the skull opening. The scalp wound healed without suppuration.

Name: Agnes Riley. *Age:* 17 Years. *Disease:* Cerebral Hydatid.

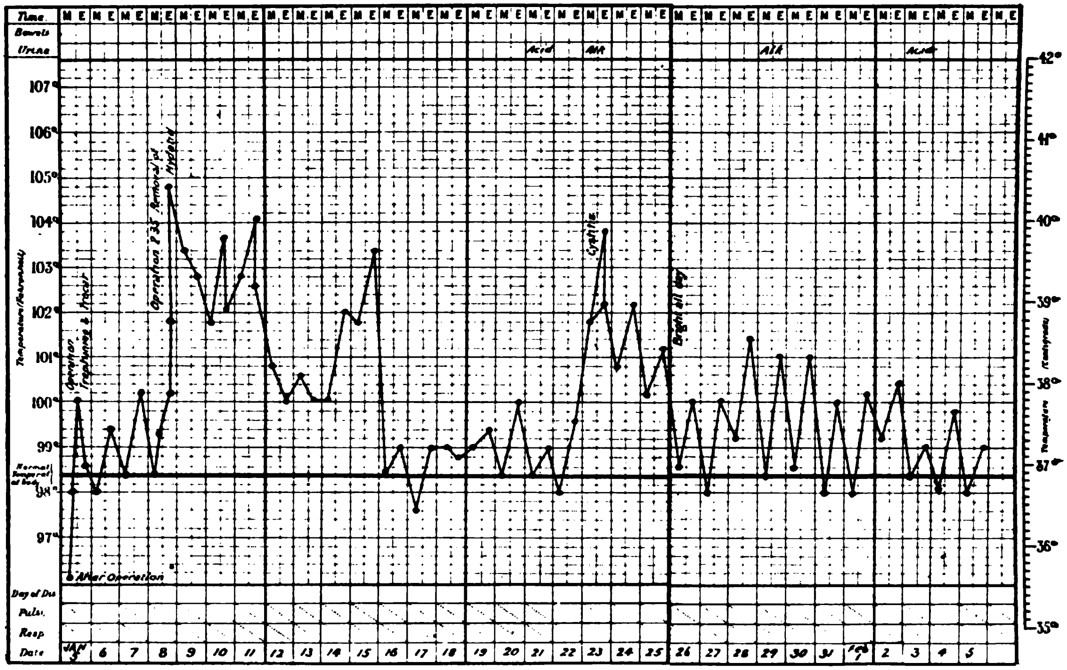


Chart to Illustrate Dr. B. POULTON'S Paper on "CEREBRAL HYDATID."

Not till the end of February did the herpetic ulceration finally cicatrise, and that long after the removal of sloughing tissue. The patient was up in a chair during the eighth week, and walked for the first time eight days later.

April 22nd.—Reports herself fairly well after two weeks at the Convalescent Home; has gained 2½ lb. since leaving the hospital; walks well; reads newspaper print easily. The right-hand grip is not quite so strong as the left; there is no elevation nor pulsation of the scalp over the opening in the skull, which seems to be filled with dense fibrous tissue.

This record is chiefly collated from the voluminous notes of my house-surgeon, Dr. Lionel Hayward, to whom, with the charge Nurse of Charity, I am obliged for their skilful conduct of an anxious case.

(**Read before the South Australian Branch of the British Medical Association.**)

An Anonymous Donation.—At the monthly meeting of the board of management of the Royal Alexandra Hospital for Children on June 13th, Mr. J. St. Vincent Welch, the hon. treasurer, announced the receipt of an anonymous donation for £2000 in aid of the building fund.

RIGHT CENTRAL HEMIANOPSIA, WITH WORD-BLINDNESS: CONFIRMED BY POST-MORTEM.

By J. Lockhart Gibson, M.D. (Edin.), M.R.C.S. (Eng.), Hon. Ophthalmic Surgeon, Brisbane Hospital for Sick Children, and Queensland Government Benevolent Asylum.

In July, 1901, I read at our meeting and published in the Gazette a paper on "Four Cases of Hemianopsia." One of these cases died in March of this year, and, through the kindness of Dr. E. S. Jackson, a post-mortem examination was obtained, at which we were both present. The results I am able to show you. Although three years had elapsed since my diagnosis of lesion in the left calcarine region, the post-mortem confirmed the diagnosis. The short published account of the case was as follows :—

Case II.—Male, aged 58, educated ; seen in conjunction with Dr. Jackson.

In August, 1900, had an attack of severe occipital headache, together with some mental confusion and diminished sight. Hemianopsia was not observed and was probably not present. There were fine vitreal opacities indicating some chronic choroiditis. He improved after exhibition of iodide of potassium, but did not continue the drug for more than two weeks, when he left for his home in another part of the colony. He was seen only twice in the early part of this attack and not again until December 19th, 1900, *i.e.*, four months later. He then stated that his sight had improved to enable him to conduct all his necessary duties and that headache had not returned until a few days ago, when he experienced severe occipital headache, together with pain in the eyes and greatly diminished sight. The headache had continued.

Examination.—Fine vitreal opacities in each. Corrected vision, R.E. $\frac{6}{60}$, L.E. $\frac{6}{18}$. Right homonymous hemianopsia, vertical lines of demarcation stopping just short of centres of macular areas. He had word-blindness, but not letter-blindness; he could write as well as his diminished sight would allow, but could not read what he had written, not even his own signature. He could, indeed, read words of two letters, but that was merely because he retained the power of reading letters. He had little or no mind-blindness. He was put on large doses of iodide of potassium, and whether as a *post hoc* or *propter hoc* his corrected vision in his sound fields improved to R.E. $\frac{6}{24}$, L.E. $\frac{6}{9}$, his headaches disappeared and his mental condition became clearer. His hemianopsia and word-blindness persisted until I saw him last in March of this year, and I believe that his condition is still the same. He was quite unconscious of the fact that the right halves of his visual fields were abolished, though conscious that he saw badly and of his inability to read.

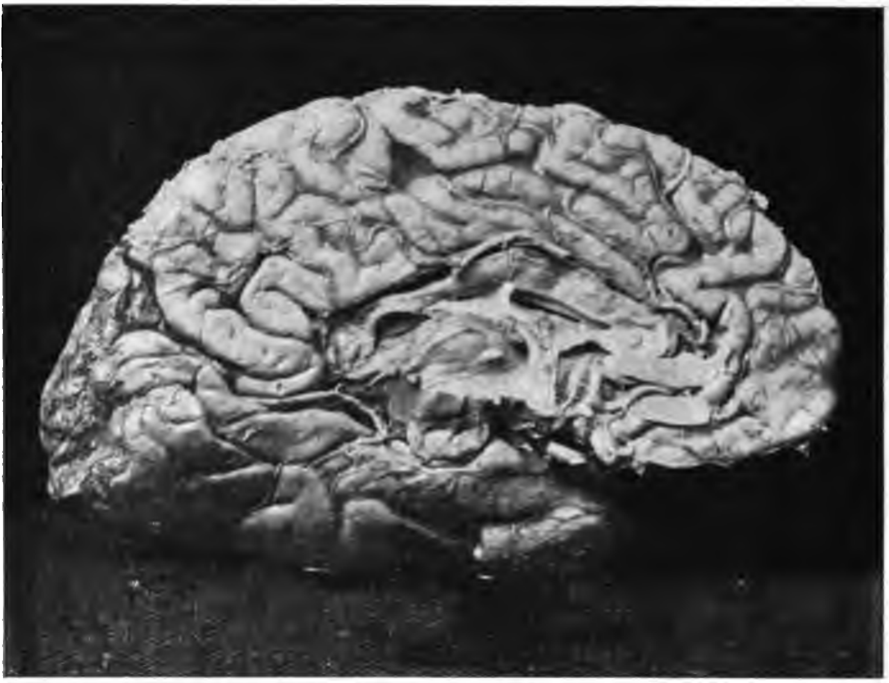
Diagnosis.—Right homonymous hemianopsia with word-blindness, but without letter-blindness, due to lesion, probably a hæmorrhage or thrombus in the left calcarine region, destroying the primary visual centre and visual word-memory centre, but not the visual letter-memory centre. The fact that he was not conscious of the loss of his right visual fields, and the fact that word-blindness existed, excluded the visual path from being the seat of lesion. The attack in August, 1900, was doubtless also a hæmorrhage or a thrombus, and it may have involved the left visual centre and been overlooked, though I fancy not. In any case it did not in August involve the word-memory centre. His fine vitreal opacities suggested chronic choroiditis, accounted for some of his diminished vision, and was a chief reason for ordering iodide of potassium. He had atheromatous arteries.

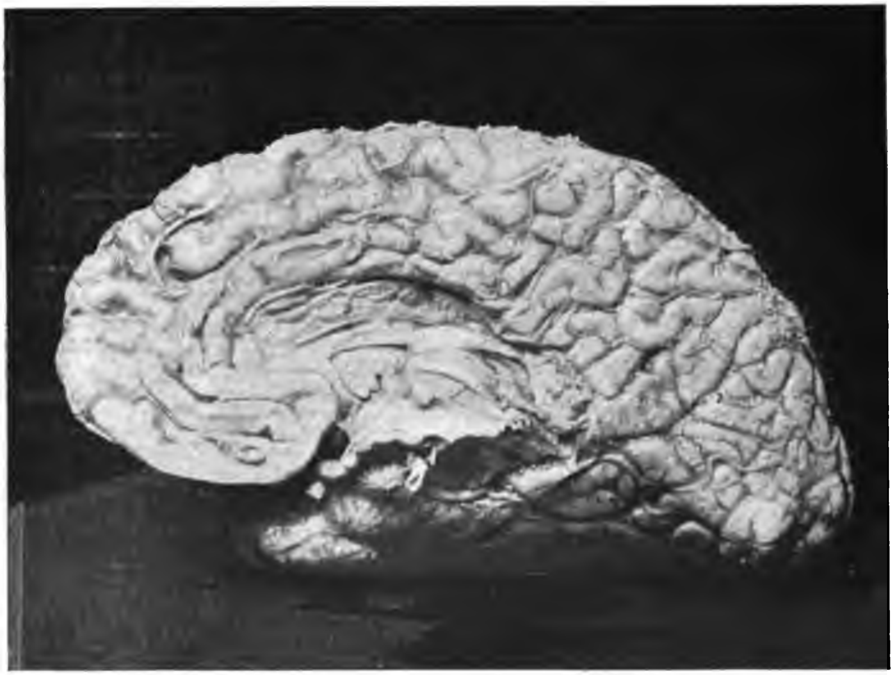
His history subsequent to my seeing him last in March, 1901, kindly given to me by Dr. E. S. Jackson, was shortly as follows :—He had apparently no brain attacks during 1902, but suffered from an attack of bronchitis. For some months before his death he had attacks of semi-unconsciousness, always preceded by asthmatic breathing. For several months prior to death his mental state became very defective, practically one of dementia. He knew hardly anyone, and for the last two months knew nobody. Until two months before his death we have evidence that he was able to recognise letters, and that *letter*-blindness was not added to his hemianopsia and *word*-blindness. Dr. Jackson found that iodide of potassium always appeared to benefit him during his attacks. It is possible that the large amount of the drug which I had caused him to take in 1901 had helped to stave off brain attacks during 1902.

A week or ten days before death he developed general convulsions, which were practically continuous for 24 hours, and he was deeply comatose for 48 hours. He then improved to be able to swallow food and even to speak, but not to recognise anyone. He died comatose on March 11th, 1904.

It appears that he had been a very heavy drinker of whisky for years, probably averaging a bottle of whisky daily, but without showing the usual signs of alcoholic excess. He was a very large eater. It is probable that he had contracted "Lues," though his vitreal opacities were the only definite anti-mortem signs of this.

Post-mortem.—Considerable excess of fluid between the dura-mater and pia-mater, and under the pia-mater. Convolutions somewhat flattened in consequence. Ventricles distended with fluid. Arteries of brain atheromatous. Posterior part of mesial aspect of left occipital lobe had disappeared by brown softening. The lesion as shown by the brain and the photographs extended to beyond the centre of the calcarine fissure, and involved both its lips. It included also a part of the posterior portion of the lingual





To Illustrate Dr. LOCKHART GIBSON'S Paper on "RIGHT CENTRAL HEMIANOPSIA, WITH WORD-BLINDNESS: CONFIRMED BY POST-MORTEM."

lobule, and the posterior and upper parts of the cuneus, The lesion was apparently of some standing, though its extent may have been more recently increased. The photographs of the mesial aspects of the right and left hemispheres will enable you to contrast the healthy and unhealthy sides. The outer aspect of the left hemisphere is as free from disease as that of the right, except a portion the size of a large green pea at nearly the posterior end of the inferior occipital convolution, which is absent from softening. No sections have been made as yet into either hemisphere, but the basal ganglia appear to be healthy.

Kidneys were large and coarsely granular, and his heart was hypertrophied.

Remarks.—Cases of central hemianopsia confirmed by post-mortem are sufficiently rare to make a complete one such as this worth recording. The brain softening, evidently mostly of old standing, was probably the result of many small thrombi, and Dr. Jackson shares the opinion that the attacks from which he suffered were probably caused by thrombi in the small vessels supplying the mesial aspect of the left occipital lobe. It is probable that endarteritis induced the formation of these thrombi. He was very depressed latterly, and complained much of his defective sight. This last had been the case when I saw him in 1901. He would then come in saying he could see nothing and then recognise the letters of $\frac{6}{9}$ in the left visual field of his better eye. His sight varied, probably partly at least on account of his vitreal opacities.

He continued to be quite unaware that his right visual fields were abolished, and that he saw only in his left fields. It was this fact, and the existence of word-blindness, that caused my diagnosis of lesion in the left calcarine region. A lesion in the left visual *path* could not have accounted for word-blindness, and would have been accompanied by a consciousness, owing to the intact state of the left visual centre, that his right visual fields were abolished. His power of reading letters, though with the parts of the retinæ supplied from the right visual centre, was doubtless due to the visual letter centre in the left visual cortex having remained intact, although the left primary visual centre was itself destroyed, and due to its connection with the right visual cortex by commissural and transcortical fibres.

A paper published by me, also in the July AUSTRALASIAN MEDICAL GAZETTE for 1901, upon recent research into the question of hemianopsia, pointed out that Henschen, of Upsala, would confine the primary visual centre to the region immediately adjoining the middle part of the calcarine fissure. In fact, he believes that the upper or cuneic lip of the calcarine fissure represents the homogeneous dorsal retinal quadrants, and the lower or lingual lip represents the homogeneous ventral quadrants of the retina. Vialet, of Paris, considers the visual centre limited only by the whole mesial surface of the occipital lobe; and Flechsig, of Leipzig, considers that at least the cuneus and lingual lobule are included in it.

It appears to me that the present case favours Henschen's limitations, as a large part of the lingual lobule is quite uninjured, and a considerable part of the cuneus is also uninjured, while the posterior half and the centre of the calcarine fissure are involved. The case, however, gives proof, not to my knowledge previously recorded, that the visual letter memory centre is in either the anterior part of the calcarine fissure or in the undestroyed portion of either the cuneus or lingual lobule. It also proves that the visual word memory centre must have been in one of the parts included by the lesion. It is probable, therefore, that in those very rare and interesting cases of letter-blindness without word-blindness, the anterior part and centre of the calcarine fissure are involved, while the posterior part has escaped.

It will be remembered that Ferrier placed the visual centre in the neighbourhood of the angular gyrus, and it is in this gyrus and the superior temporal on the outer aspect of the left hemisphere that the *auditory* word centres are now considered to be placed. The word-blindness, which is recognised by disturbances of speech and by agraphia, depends upon lesions in the neighbourhood of the angular gyrus, and is not accompanied (if the calcarine region be intact) by failure to visually recognise the words which the patient can neither speak nor write.

(Read before the Queensland Branch of the British Medical Association.)

At the last meeting of the Senate of the **University of Sydney, the Vice-Chancellor (Dr. P. Sydney Jones) tendered his resignation as a member of the council of the Women's College. It was resolved that Mr. H. C. L. Anderson be appointed to the position for the remainder of Dr. Jones's term.**

PERITONITIS OR ILEUS?

By C. MacLaurin, M.B. (Edin.), Surgeon to the Women's Hospital, Paddington, and Assistant Surgeon to Royal Prince Alfred Hospital, Sydney.

WHEN a patient, after an abdominal section, becomes distended, begins to vomit, and is obstinately constipated, his condition arouses grave doubt and hesitation in the surgeon's mind. Is he suffering from peritonitis, ileus, or so-called pseudo-ileus? No problem in surgery is more difficult and more important. The treatment that cures pseudo-ileus kills real ileus; the treatment that may cure ileus merely hastens the end of peritonitis. A brief critical review of the symptomatology may be useful.

SYMPTOMS.—*Peritonitis.*—No disease is more vaguely treated in most text-books. There is a great opening for someone to give an exact account of the symptoms of peritonitis caused by different organisms, probably varying also with the region first attacked. We find—(*a*) pain; (*b*) collapse; (*c*) vomiting; (*d*) feverishness; (*e*) rapid pulse; (*f*) respiration; (*g*) rigidity; (*i*) constipation; (*j*) facial expression and attitude; (*k*) mental charges.

(*a*) *Pain.*—May or may not be severe at first. When peritonitis is well established the pain is usually very great, but there may be practically none from start to finish. The abdomen is generally tender; the patient may not be able to bear the weight of the bed-clothes.

(*b*) *Collapse.*—In peritonitis collapse is well-marked, but, of course, after every abdominal section there is generally a good deal of shock. Occasionally the patient recovers from the anæsthetic, but not from the shock; the pulse rises, and death comes in a few hours. What is this condition? Till recently it was called "death from shock," nowadays we believe it to be an overwhelming peritonitis, perhaps from bowel-infection.

(*c*) *Vomiting.*—The vomiting of peritonitis is characteristic. It does not begin till after 24 hours; therefore, anæsthetic-vomiting prolonged after that period is always suspicious. The vomited matter is green, often at first frothy; later on simply watery green fluid. It then often becomes brownish-yellow, and it has been likened to beef tea mixed with egg. Nurses generally call this "coffee-ground vomiting," but it must be carefully distinguished from the real coffee-ground vomit of gastric ulcer, which derives its colour from half-digested blood. The peritonitis vomit becomes offensive and may by a little exaggeration be called fæculent. Generally the patient dies or gets better before real fæculent vomiting occurs.

The manner of the vomit is as important as the matter. It is continuous, effortless, in small quantity at a time. The patient simply lies on her back, turns her head on one side, gives a little gurgle, and some filthy stuff runs out of the mouth and over the cheek. Later on it runs out of the nose too, and then she soon dies. There is no gushing of large quantities at least till near the end. Yet even this symptom is not entirely characteristic. I once saw a girl of ten who was vomiting exactly as they do in peritonitis, the same sort of material in the same lazy unceasing way, and I nearly operated on her; but her abdomen was quite soft and the bowels were acting freely, so I left her to her physician. However, she died, and at the post-mortem examination they found no peritonitis, but severe enteritis. The post-mortem diagnosis was ptomaine poisoning.

(*d*) *Temperature.*—In peritonitis there is generally some fever, sometimes 104° to 106°. But the temperature may be normal or subnormal, and it is possible that the amount of fever depends upon the organism causing the inflammation. There is room for a valuable monograph here. Before death I have seen the temperature fall from 104° to 96° in a few hours.

(*e*) *Pulse.*—This is another valuable sign. After the operation a patient's pulse is frequently very rapid, 120, 130, or sometimes more, according to the amount of hæmorrhage and shock. This rapid rate should fall below 100 in the course of 24 hours. If it remains above 100 there is cause for anxiety, and more especially if it begins to increase steadily. A typical case of the general peritonitis pulse is as follows:—Operation for extra uterine gestation; patient nearly died on table; the whole operation had to be done with the utmost speed, and probably there were plenty of openings for germs to slip in. Pulse of operation, 176; twelve hours later, 104; end of first day, 108; morning second day, 104; evening second day, 120; morning third day, 112; evening third day, 132; morning fourth day, 126; evening fourth day, 136. This patient eventually recovered.

The pulse is not only rapid; it is thin, wiry and weak. Patients with peritonitis very seldom have a full and bounding pulse. Yet, so protean is this disease that I have seen two cases of general septic peritonitis, following on ruptured intestine, in which the pulse-rate was not higher than 80, in the one instance for 12 hours, in the other for four days after the injury. Thus a patient may have grave peritonitis with a slow pulse.

(*f*) *Respiration*.—Invariably rapid, at any rate in my experience. It may rise to 66 per minute, and is shallow, hurried, checked at the end of inspiration, and frequently accompanied by slight moaning. I look upon this as a valuable early sign. It is entirely thoracic; there is not the slightest movement of the recti even in the epigastrium.

(*g*) *Rigidity*.—In general peritonitis the recti are rigid, beginning over at the seat of injury and spreading thence. They do not move with respiration, and they strongly resist palpation. Rutherford Morison looks upon rigidity as an important sign for prognosis.[1] If the recti are rigid the patient will die; if they are lax there is some hope of recovery. I personally have never seen anybody recover after the recti have become entirely rigid. In women, however, the muscles often remain apparently soft. No doubt they are really doing their best to contract, but are so flabby and fat-laden that one cannot feel them, and therefore a favourable prognosis cannot be so readily given as in men. The general rule holds good that so long as the recti are not entirely rigid there is still hope. Morison, in an article on "Some Abdominal Catastrophes," published some two or three years ago, which I am not at present able to locate, goes so far as to say that when rigidity is well marked operation is already hopeless, as general peritonitis is to all intents and purposes an inevitable fatal disease. This is a view which is becoming more and more widely held, but it would lead us too far afield to discuss it.[2] It is ably treated in a pessimistic way by Cheyne and Burghardt, and a candid investigation of cases will probably convince us that they are right.

(*h*) *Distension*.—While distension is a marked feature of late peritonitis, it is noteworthy that for a few hours the abdomen may be and generally is actually sunken. This is an exceedingly important practical point in peritonitis following injury, where one is in doubt whether to operate. Distension in peritonitis following abdominal section begins usually in the epigastrium, and is accompanied by increasing dyspnœa. The rigid recti slowly relax as the bowels distend; borborygmi are heard, but cease as the patient sinks; no flatus is passed per rectum, but great quantities of wind are constantly coming up with the vomit. In other words, the intestine is, so far as its normal movements go, absolutely paralysed. An entirely rigid distended abdomen is, in my experience, a fatal condition.

(*i*) *Constipation*.—In most cases, absolute. No flatus is passed, except a little through the rectal tube. In severe septic cases there is sometimes diarrhœa, a proportion of 28 per cent.[3] Out of eleven cases of all sorts of general peritonitis, of which I have the records by me as I write, two had diarrhœa. Sometimes the bowels act not long before death, after previous constipation, but, as a rule, even the slightest attempt at a motion is a favourable symptom. When there is diarrhœa, the motions are highly offensive.

General Condition.—There is no more distressing disease to watch; and I suppose there can be none to endure, though few indeed return to tell us of their sufferings. The patient lies on his back. His knees are drawn up, and his face is ashy grey, haggard, anxious, peaked; the lips are blue and parted, the ears stand out, the forehead is cold and bathed in sweat, his hands and feet are clammy, and if you lift them they fall almost unresisting to the bed. The teeth are covered with sordes, and show yellow between the half-open lips. The state of the tongue varies; it may be dry and brown, thickened, cracked, or moist, red and clean. Like everything else in this astonishing disease, it is subject to variations between diametrically opposite poles. The mental condition varies. The usual statement, that the mind remains quite clear till the end is, in my experience, hardly accurate. The mind is clear in the sense that there is seldom any actual delirium, but the patient is, if one may say so, both depressed and excited. He is depressed by pain, misery, and forebodings of impending death; he is at the same time restless, querulous, and often more or less incoherent, especially for a few hours before death.[4] Those patients who have recovered seldom retain any definite recollection of what has happened. Thus, one patient upon whom I operated, after a desperate illness, recovered with the firm conviction I had anæsthetised her and another surgeon had operated, and did not recollect that she had had two operations altogether.

Review of Symptoms.—Are there, then, any absolutely diagnostic symptoms of peritonitis? I think there are two, and only two. The first is the rigidity of the recti; the second is the anxious face. I have never seen a case of peritonitis without these two signs; although, as has been said, every other sign and symptom may vary in the most astonishing degree.

Ileus.—That intestinal obstruction may occur soon after section, independently of peritonitis, has been recognised for some time. Cheyne and Burghardt well describe it as intermediate in type between acute and chronic obstruction; but one may meet cases of extreme acuteness, which it is always well to bear in mind when anything goes wrong after laparotomy. Causes: Due to vomiting; due to adhesion.

(*a*) *Due to Vomiting.*—Hernia into foramen of Winslow; hernia into fossa jejunoduodenalis; hernia through omental slit. Strangulation by band. Volvulus of small intestine through careless reposition. These cases are generally very acute, though Bloodgood[4] describes an instance of hernia into the fossa jejuno-duodenalis, which was comparatively mild in its course. A case of hernia into the foramen of Winslow that came under my own notice after a laparotomy was exceedingly acute. Ventral hernia, due to vomiting, the intestine gets through the peritoneum and between the recti, where it becomes adherent and is partly nipped. This variety is usually sub-acute.

(*b*) *Ileus due to Adhesion.*—Kinking of intestine due to adhesion or some such cause as a blood-clot. This is the most important cause of obstruction after section, and one should always be on the lookout for it. Hotchkiss, of New York, wrote a paper on it in 1901, stating that it was most common after appendicectomy. He refers to 20 cases, and gives three of his own. I have found another case described, and have seen one in my own practice. It is a condition worthy of more complete investigation. That it should have occured three times in the practice of one surgeon during a short period appears as though it were more common than has heretofore been thought. The time of onset varies from the second day (my own case) to the sixteenth day. Most of the cases seem to occur about the end of the first week. Cheyne and Burghardt state that the condition is usually at its worst about the sixth day. The symptoms, in cases free from peritonitis, are easily recognised. There are abdominal distension, colicky pains, difficulty in getting the bowels to act. In forty-eight hours constipation becomes complete, the pulse rises, and toxic absorption and peritonitis proceed with great rapidity, causing an early fatal issue. It is important to remember that, though the symptoms may be comparatively chronic, yet the condition is essentially an acute obstruction. The difference is as follows:—In a chronic obstruction, as in cancer, chronic adhesions, or ordinary constipation, the harm to the patient is done either by the disease causing the condition, or simply by poisoning from fœcal matter. In acute obstruction, the fatal issue is caused, not by constipation, but by strangulation of the gut. In dogs, when the intestine is aseptically divided and sewn across, the only symptoms are vomiting and starvation.

Have we any means of diagnosis from peritonitis? In my own case the problem was difficult, because symptoms began two days after operation. We diagnosed obstruction from the violent gushing vomit, rapidly becoming fæculent, the absence of rigidity of recti, the slow pulse, and the comparatively calm face. I reopened the wound after he had been ill 48 hours, and found that a piece of the ileum had kinked abruptly on itself, and the angle was already gangrenous. When it occurs after the fourth day, of course diagnosis is easy enough.

Bloodgood is at present investigating the condition of the blood after abdominal section, a course which we are also pursuing up at Prince Alfred Hospital. Preliminary results given by Bloodgood are:—(*a*) In cases of pseudo-ileus, the leucocyte count never rises above 15,000. (*b*) In intestinal obstruction it rises from 15,000 to 30,000. (*c*) In peritonitis it ranges much higher.

Dr. Smith, at Prince Alfred Hospital, is at present investigating the subject; so far I am only in a position to give a preliminary note. There have been two cases of septic peritonitis after section. In the one case the leucocytes rose to 70,000; the other one was exceedingly rapid, the patient never rallying after the operation, and in her the leucocytes did not increase.

So far the results have hardly agreed with those of Bloodgood. There appears to be generally a considerable reaction after section, at any rate after gynæcological sections, in which there is so much interference with adhesions; and it is impossible to say that a rise to 15,000 means intestinal obstruction. What seems to be important is, however, that a rise of over 30,000 means peritonitis.

REFERENCES.—1. *Edin. Med. Journal*, Jan., 1904. 2. Manual of Surgical Treatment, vol. vi., pt. i., p. 405. 3. Treves. 4. Note, however, how seldom women dying of peritonitis after criminal abortion betray the name of their murderer. 5. J. C. Bloodgood, Ann. Surgery, Dec., 1903. 6. Annals Surgery, 1901, vol. ii.

(Read before the New South Wales Branch of the British Medical Association.)

CONSERVATISM IN RENAL SURGERY.

By H. V. Critchley Hinder, M.B., Ch.M. (Sydney), Hon. Surgeon, Royal Prince Alfred Hospital, Sydney.

I DO not wish to place before you the collective evidence of many authors as to when and why a kidney should be preserved; you can do that very well yourselves; but my desire is simply to point out with a few illustrative cases what my own views are upon this subject. I grant you that they may not be of great value to the majority, but I hope I shall be able to excite your interest in a subject of very great importance, and induce you perhaps to give more thought to it than you may have hitherto done.

There certainly does seem to be a sort of fascination about the complete removal of an organ. Probably very often there is a good cause for removal, but when the desire is present the excuse for doing so is not far off. When some years ago the removal of essential parts of the body was confined to the limbs, the knife was used with much greater liberality than it is at present. I grant you that antisepticism had a great deal to do with this, but not all. Pelvic surgery then came into vogue, and some excellent efforts are now made to preserve to women some remnant indicating their sex. Although we know that a man may be able to live with one kidney, no one can seriously believe that he is as physically fit to maintain the struggle for existence as a man with two kidneys.

The wave of conservatism has only recently reached renal surgery, and it has not yet been universally recognised. Some surgeons have even said to me that nephrectomy is much less dangerous at times than nephrotomy, but I think most of us would find this very hard to believe.

I shall begin by speaking of conservative surgery in connection with stone in the kidney. Stone is occasionally found in the kidney with hardly any evidence of suppurative conditions in its neighbourhood, and again it may be found in association with an abscess or a large collection of urinous fluid. A casual examination would lead an operator to imagine that the kidney had been wholly destroyed. It is not likely that any surgeon would advocate the removal of a kidney simply because stone is present, but there are certainly some who believe in removing a kidney because of the great apparent destruction wrought by suppuration or cyst like distension. Such a complete destruction is, however, very rare.

Others maintain that the difficulty of removing the kidney at a second operation when a persistent sinus remains is so great that the added risk is not worth while. But difficulties should be our servants and not our masters, and by means of ligature or clamp almost any kidney can be removed; at all events, a preliminary nephrotomy will not make a possibility an impossibility. I remember once failing to remove a kidney simply because I could not find it, nor could it be found when the patient died some six weeks after. A stone had been removed from his kidney on three different occasions, and his kidney tissue had completely disappeared. In some cases of advanced suppuration from different causes it may be impossible to remove a kidney, but such cases must be very uncommon and usually occur in patients who are in a very desperate condition of health. In almost every case of suppurative nephritis with stone, all the stones shown in a carefully taken photograph should be removed, and all abscess cavities carefully opened and cleansed. If there is stone and a cystic dilatation, search diligently and see that the ureter is permeable, and if there is any doubt at all let it be in favour of allowing the kidney to remain.

Let me briefly relate the history of two patients whose clinical condition may serve to emphasise my remarks.

I operated upon a woman eleven years ago with the assistance of my friend, Dr. C. J. Martin, who early impressed upon me the importance of always leaving a patient a full measure of kidney tissue. This woman's kidney appeared to be nothing but a large cyst containing eleven stones and about a quart of fluid. I removed the stones and drained the cavity. The amount of urine which, after a few days, flowed away through the wound in the loin was excellent evidence of the recuperative power of the kidney, and the wisdom of the treatment adopted. The sinus closed in four months and the patient has had no further trouble.

The details of the next case are not quite so perfect as I should wish. A woman of 60 years had been operated upon for a large cystic kidney which held about a pint of fluid. The whole kidney was removed by the surgeon in charge; it contained two stones. Eighteen months after she came into hospital with the remaining kidney enlarged, and passing a quantity of pus in her urine. The pus could be seen coming from the ureter. I cut down upon the kidney and found three stones in three distinct abscess cavities. The cavities were washed out and drained. I felt sure that the woman would die. She passed only 13 ounces of urine during the 24 hours for the first few days. This amount gradually increased to 40, when she left the hospital apparently well.

This case tells its own story. It certainly was a pity that the first kidney had been completely removed, and the patient's recovery from the second operation speaks wonders for the recuperative power of the kidney. It is by no means uncommon to find stones in both kidneys at the same time; sometimes, unfortunately, the presence of stone in the other kidney is not discovered until one has been removed, but such a mistake can easily be prevented by making it a rule to photograph both kidneys in every case of suspected stone in the kidney.

Cases of traumatism are particularly amenable to a conservative line of treatment, and yet, strange to say, kidneys lacerated by external violence are very frequently removed, and, so far as one can judge, without sufficient justification.

I have operated upon four patients, all of them being below the age of 14. In two of them the injury was caused by slipping and falling against a kerbstone, and in the other two by falling from a fence. In one I found several fissures across the kidney and much blood clot. A couple of stitches and gauze packing stopped the hæmorrhage. In two others the state of affairs was very much the same. The lower third of the kidney was crushed and pieces hung by shreds. All blood clot was removed and loose pieces of kidney were gently taken away. Steady pressure was applied to the bleeding surface for a few moments, and then the part was carefully packed with sterile gauze. In the fourth case I operated one hour after the accident, when it was evident that bleeding was rapid and the case urgent. I quickly scooped away a lot of blood clot and found the kidney split in half from the dorsum to the pelvis and bleeding furiously. Two fingers were slipped round so as to grasp the renal vessels, and having thus controlled the hæmorrhage the two halves were brought together with catgut suture. The child recovered, though urine came freely through the wound in the loin for nearly three weeks. Where there has been a slight amount of hæmaturia and very slight increase in bulk over the renal region it is best to leave the patient alone. If he is not catheterised the temperature is not very likely to rise unless there is also some extravasation of urine.

All these patients recovered. Judging by statistics I should probably have lost some of them had I removed the kidney. The very marked shock which attends removal of the kidney would probably kill a patient already suffering not only from shock but also from the loss of a considerable amount of blood. In all cases avoid catheterism unless the patient is absolutely unable to pass urine, because catheterism is almost certain to introduce sepsis despite every precaution.

There is a certain class of case often spoken of as symptomless hæmaturia. From these we must exclude those which are due to stone, tubercle, or growth in the bladder or kidney, and I should like to mention in passing that villous growth is nothing like as common as many people imagine. I have only met with four cases of villous growth in the bladder, and one in the kidney, in a very large number of cystoscopic examinations. The cases of symptomless hæmaturia I shall bring before you, are simply those in which there were practically no other symptoms but the presence of blood in the urine. Fenwick states that every case of hæmaturia will show the presence of casts if a thorough search be made. It is more than probable that some of the seven cases which came under my notice were due to chronic nephritis, and possibly that this nephritis was in an early stage and confined to one kidney. The existence of unilateral chronic nephritis is supported by the fact that some patients live for many years with definite symptoms of chronic nephritis, and these patients are usually young. I saw one young woman thirteen years after she had suffered from acute scarlatinal nephritis and eleven years after Dr. Pockley had made a positive diagnosis of albuminuric retinitis. Granted, then, that a case of nephritis, whether we choose to call it subacute or chronic, does first attract attention by the presence of blood in the urine, would it not be unwise to remove the kidney when there is a possibility that the other kidney may not be above suspicion from the same cause ?

Undoubtedly the occasion may arise when a surgeon feels that it is wisest to remove the kidney because he thinks that he is giving his patient a better chance of life than if he performed nephrotomy, or he may have so little faith in nephrotomy that he is afraid lest it should leave the hæmaturia unimproved. For my own part I shall never believe that a carefully conducted nephrotomy is more dangerous than a nephrectomy, and the fact that these patients of mine did not die and retained their kidneys, although some of them were far from being good subjects, will, I hope, encourage others to place a somewhat greater reliance on the conservative method of treatment.

One of these patients dated her history of hæmaturia from an accident received some five years ago, when she was thrown out of a buggy, and suffered with hæmaturia for three days, and slightly off and on since then. Two years ago she was compelled to take measures to prevent its recurrence. The kidney appeared to be caught in a dense mass of adhesions at the upper pole. In stripping this clear, small portions of kidney substance adhered to the capsule ; still the loss of blood was trifling. At the end of the week the hæmaturia had entirely ceased, and she has had no recurrence up to three months ago, when I last heard from her.

Another patient, a woman of 28 years, had been passing what appeared to be pure blood for five weeks. She was very nervous and anæmic, and could with difficulty be induced to submit to operation. All I could discover was what appeared to be a large bulla filled with blood on the lower part of the kidney. On slitting this open it was seen that the capsule had been lifted off the kidney by some extravasated dark blood. The renal surface beneath was coarsely granular. Within 24 hours the hæmaturia had ceased, and she left hospital at the end of three weeks quite well. Hurry Fenwick mentions a case precisely similar to this.

Another remarkable case occurred in a thin old lady of 72. After coming into the house from attending to her garden she noticed that her urine looked like pure blood. This went on for three weeks. She was absolutely free from pain. On examination, some fulness and resistance were to be felt over the right kidney, which was enlarged. The *left* kidney could be felt, and was absolutely free from any suspicion of tenderness. The blood was so free that a cystoscopic examination had to be conducted very rapidly. However, I was able to detect a flow of blood from the *left* ureter, while the right emitted perfectly clear urine. I cut down upon the kidney, but was not able to deliver it from the wound, and in endeavouring to do so I actually pushed my finger right through the lower end of the organ. Steady pressure for a time soon stopped the oozing from the laceration. My professional friends who were present rather urged me to remove it altogether. However, in addition, I simply stripped off the capsule and sewed up the wound. The patient did not lose more than an ounce of blood ; yet the hæmaturia eased off and completely stopped at the end of the fourth day. So great was the shock she experienced after this operation, I greatly fear the major one of nephrectomy would have been fatal. The wound healed by first intention, and there has been no renal trouble since.

I shall not weary you with a recital of the other cases. All I could see was a more or less patchy paleness, which was not usually observable in a healthy kidney. The earliest of these cases was operated upon some years ago. After examination, all I did to them was to strip back the capsule in the lower portion, and push my finger through from the convex border to the pelvis, seeking for stone, and then with my finger in the pelvis I palpated the whole of the kidney in a bimanual fashion. The pedicle was usually too short to allow of a complete examination on the loin.

Strange to say, this method of operating is what Fenwick now recommends for those vascular or nævoid conditions of the papilla which he has but recently described. It would appear that this rough handling largely obliterates the vascular arches in the cortex. If the case be one of nephritis, such a decapsulation and relief of tension cannot do otherwise than have a favourable influence on the pathological condition present. Only one of this type of case was attended with a doubtful result, inasmuch as the hæmorrhage, which had been present for at least four months before operation, did not cease until six weeks afterwards. So far as my memory serves me, I did not make so thorough a digital examination as usual.

The very first patient I ever operated on for symptomless hæmaturia was a young man who was admitted to the Royal Prince Alfred Hospital some years ago, before I had used a cystoscope. On opening his bladder, suprapubically, blood was seen to be coming from the left ureter. The left kidney was explored and opened up. The hæmorrhage ceased, though nothing could be discovered at the time. Some time after this I heard that the hæmorrhage had returned, and that the other kidney had been removed at another hospital, and also that all hæmorrhage had again ceased, so that nephrotomy had apparently cured the kidney first operated upon. On enquiry at the hospital I was told that nothing could be found wrong with the kidney, but since then the operator has assured me that interstitial nephritis was evident. If such were the case, and I have no reason to doubt it, surely nephrotomy was preferable to nephrectomy.

I think that the recovery of every one of these patients is the strongest argument which I can bring forward in favour of the conservative treatment. I think, too, that you will admit that some of them at all events were very ill. A patient who is strong enough to bear a nephrectomy ought to be strong enough to bear a nephrotomy; and these cases show us that the outlook is certainly in favour of the cessation of hæmorrhage at a very early period. In these days of scientific surgery the loss of a kidney cannot but be looked upon as a very grave and deplorable surgical calamity, and nothing but the most serious condition can justify its removal.

No attempt at resection of renal growths is likely to be attended with marked success, nor can anything but radical removal be countenanced when malignant disease is present. The simple growths are extremely rare, and seem either to be very prone to take on a malignant action or to so closely resemble malignants that resection becomes of doubtful value.

I feel that I shall now tread on debatable ground—that is to say, on ground that is much more debatable than that which I have already touched upon.

Tubercular disease of the kidney is certainly one of the most serious conditions it falls to the lot of the surgeon to treat, and I do not think that it would be amiss if before I should venture to express an opinion myself I should make known to you the views of some surgeons who have had a considerable amount of experience in this particular class of work.

Henry Morris performed partial nephrectomy in seven cases. In three, total nephrectomy had susequently to follow, and the other four were known to be alive for from two to four and a half years afterwards. Out of 415 operations upon tubercular kidneys collected by Garceau, six were partial nephrectomies. One died in four months' time, and the others were alive and had already lived for from 11 months to three years. Abbarran condemns partial nephrectomy, claiming that what appears to be healthy tissue left behind is not healthy tissue at all. König and Pels Leuden also condemn it, basing their opinion on the examination of 16 kidneys. In not one of these kidneys would resection have been justified.

These statistics are really not very valuable, because all we know of them is that the patients were alive; and in one case it is remarked incidentally that the patient had a fistula. I have performed partial nephrectomy in three cases. The first operation took place five years ago in a patient who was a kangaroo shooter. Since the operation he was living in a tent for at least 18 months; but a sinus still persists, and he was, when last seen six months ago, thin and rather miserable.

A bootmaker, living in the country, had a small focus removed three years ago. Four weeks afterwards the scar appeared to melt away in the centre, and a little serous discharge appeared, until at length a sinus discharging pus was firmly established. I lost sight of him for two years, when he wrote to me, and I gathered from his medical attendant that he had tubercular foci elsewhere; yet he was alive four months ago.

The third case was a lady, whom I operated on about four years ago. She had three small tubercular foci in one kidney, and apparently the rest of the gland was healthy. These foci were carefully cleaned out, and union by first intention was obtained, but at the end of three or four weeks a gradual infection of the scar took place, leaving a sinus. Further operative treatment was objected to, and she soon showed two tubercular foci near the clavicle. This patient is alive, but she has an inflammatory mass about the kidney region, and she suffers at times from pocketing of pus.

A great effort was made in each of these cases to ensure the operation being a thorough one; but the result was deplorable, and I feel sure that a complete nephrectomy at first would have left them more comfortable, and possibly with a better chance for an ultimate recovery.

The following case forms an interesting clinical picture in many ways. A young woman of 20 years lost her father with chronic nephritis. She one day had an attack of what appeared to be a mild renal colic which lasted only a few hours. After this she noticed that vigorous exercise brought on a slight frequency of micturition for a few hours, but this was never noticeable at other times. Occasionally she found that her urine was clouded directly it was passed. She was told that albumen was present in her urine, and her mother was afraid that she was suffering from her father's disease. There was no renal tenderness, but slight tenderness on deep pressure just above and to the left of the pubes. On bimanual examination, the left ureter could be felt slightly thickened. Cystoscopic examination showed a dull reddish prominent ureteral orifice, with three tiny ulcers lying adjacent, within a radius of half an inch. Occasionally a few specks of white could be seen puffed out from the ureteral orifice. The right orifice and the rest of the bladder were normal. I cut down and was able to get the kidney right out on to the loin, but not a sign of tubercle could be discovered, except a suspicious œdema about the pelvis. Notwithstanding this, I was positive that the kidney was tubercular, so I removed it, with a portion of the ureter. It was only by a careful section of the kidney after removal that a small focus was discovered in the lower part, and this communicated with the pelvis. This patient healed without suppuration; but about three weeks after a sinus formed and healed completely in less than three months. On seeing her at this time I examined the bladder with the cystoscope, and could find no trace of any pathological condition, nor could I feel the portion of the thickened ureter which was left. The patient has now been in good health for about 12 months.

Were it not for the cystoscopic examination and the bimanual palpation of the ureter, I feel confident that it would have been well-nigh impossible to say that the kidney was tubercular. However, it is not my intention to discuss methods of examination, but to point out that this small focus, if discovered in an exploratory examination of the kidney, might have been removed, leaving the whole of the infected pelvis of the kidney behind.

In the later stages of tubercular disease of the kidneys, if one kidney is large and a source of pain and annoyance to the patient, it should be removed, or at all events drained, provided that the other kidney is not affected to too marked a degree. Some argue that the ureter should be removed in every case lest a tubercular focus should be left behind; but it should be remembered, on the other hand, that the kidney is always secondarily affected. If the ureter is simply a large, thickened cord, by all means get rid of it; but in cases where there is not marked thickening, and particularly where the bladder wall is also infected, a portion of the bladder wall would also need removal if the thorough local removal were considered to be absolutely essential. Huge cuts through the abdominal wall are not to be lightly undertaken, for they may leave the unfortunate patient with paralysed muscles and a lax abdomen, from which he may never recover.

In conclusion, I should say that resection of a portion of a tubercular kidney can never be looked upon as an operation to be recommended, for the simple reason that one can never tell whether the whole of the affected part has been removed. In removing a tubercular kidney every care should be taken to avoid infecting the wound with tuberculous material.

(Read before the New South Wales Branch of the British Medical Association.)

The estate of the late Dr. S. D. Bird, of "Montreaux," Kensington-road, South Yarra, consisting entirely of personalty, has been valued for probate purposes at £2650. By his will, which was executed on June 8th, 1894, he made his widow his sole beneficiary.

FURTHER NOTE ON A CASE OF UNILATERAL GIGANTISM.

By C. Reissmann, M.A., M.D., B.C. (Camb.), B.Sc., M.R.C.P. (Lond.), Adelaide.

The present case was originally reported by me in the *Australasian Medical Gazette* on September 20th, 1902. The case is in some respects unique, and as the paper above referred to was noted and commented upon in medical journals both in England and the Continent[*] there seemed to me some reason for placing on record the subsequent history of the patient. The child was born on January 4th, 1902. At the present time, May, 1904, he still exhibits right-sided gigantism. The cheek, arm, forearm, hand, leg, and foot on the right side are abnormally large, larger than the corresponding parts on the left side. Yet the difference between the two sides is not quite as great as it was 20 months ago.

The giant side has not grown proportionately to the sound side. The right leg is 5 c.m. longer than the left leg. The circumference of the right calf is 9.5 c.m., that of the left calf 8 c.m. The tissues actually enlarged include skin and nails, subcutaneous tissue, muscles and bones. Since last reported, however, the bones do not appear to have grown larger on the giant side. In consequence, there is now no appreciable difference in size of the two halves of the lower jaw. In 1902 the right mandible was much larger than the left. The right side of the tongue is almost twice as large as the left side, so that the tongue when protruded looks enormous and deviates widely to the left, giving the child quite a droll appearance. The scrotum and testis on the right side are twice as large as on the left side. The head is large for a child of its age, but the left side of the cranium, in the parietal and occipital regions, is larger than the right. The left side of the body, with the exception of the cranial vault, is well developed and perfectly normal. There is a small umbilical hernia. There are no nævi, moles, or other congenital marks. In the deep layer of the skin in the epigastric region are two painless nodules 0.5 c.m. in diameter. These nodules were not present when the case was first reported. Similar nodules, sometimes described as molluscum fibrosum, are frequently found in cases of acromegaly. The child now possesses 16 teeth. He speaks well, and does not lisp. He is intelligent, active, and strong but irritable. The large side is the stronger side.

The peculiar interest in this case lies in the association of left cranial enlargement with complete right-sided gigantism. This association suggests some casual relationship presently to be discussed. No other case of gigantism is reported in which the enlargement has effected one half of the body and the opposite half of the cranium.

Brüning[*] has collected 11 cases of so-called congenital unilateral hypertrophy published since about 1850. The ages at which these cases came under observation varied from 7 months (my case) to 27 years. Of the 11 cases, 8 were males, 2 females, and of two the sex was not stated. In two cases the temperature was higher on the enlarged side than on the sound side. In two cases there was, in addition to gigantism on one side, an enlargement of some of the digits on the sound side, viz., in one case two toes were enlarged, in another case the index and middle finger were enlarged on the sound side. Professor England has further reported[†] a case of hypertrophy of the left side of the face in a girl aged 2 years and 2 months. The enlarged parts included the ear, the hair, the alveolar processes of both maxillæ, the eyeball, and eyebrow. The child was backward mentally. A partial post-mortem only was permitted. This revealed a large neuro-fibroma, involving all the cranial nerves which could be examined, viz., the seventh to twelfth cranial, and also the first cervical. Professor England thinks the hemi-hypertrophy was due to an abnormal trophic influence of the affected nerves.

The cause of unilateral gigantism is quite unknown. Most authors refer it to an error of embryonic development, but they are unable to define either the nature or the precise seat of this error. One can imagine a developmental fault to affect the mesoblastic somites of one side of the embryo and to result in gigantism of that side ; but this would not account for the enlargement of the opposite side of the cranium noted in my case.

I would suggest that in the present case some part of the central nervous system

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[*] *Lancet*, January 10th, 1903, p. 118, Annal. de Méd. et Chir. infant, 1902, 793, Münchener Med. Woch., 1904, 385.

[*] *Mün. Med. Woch.*, 1904, p. 385.

[†] *Montreal Medical Journal*, Nov., 1902, abstracted in *Lancet* Dec. 20th, 1902.

(? the left parietal cortex) is primarily at fault. The existence of a separate set of nerves which govern the growth of cells (trophic nerves) is now generally denied; but it is an established fact that the nutrition of all tissues is directly dependent upon the healthy state of the nerves, both motor and sensory, which govern them. Destroy a motor nerve, and the muscle wastes; and, *vice versâ*, remove a muscle and the cells in the corresponding region of the spinal cord waste. Stimulate a motor nerve to repeated activity, and the muscle it supplies will grow more than others.

It is a noteworthy fact that none of the 11 reported cases of gigantism were observed and reported until some time (in one case 27 years) after birth. In my own case, which is the youngest case recorded, the mother distinctly states that nothing was noted amiss with the child until he was some weeks old. I am not quite sure whether the term "congenital" is correctly applied in these cases. One may conclude from this that the overgrowth of tissues did not commence until after the nervous system had established what I may call trophic control over the peripheral tissues. If the condition of gigantism is due to an abnormal condition of the developing mesoblast, as has been suggested, it is somewhat remarkable that not one of the 11 recorded cases should have been recorded at birth.

Again, some of these cases exhibit symptoms which point more directly to an abnormal condition of the nervous system. Mental weakness was observed in two of the cases, impaired memory in one. Eight of the cases exhibited certain vaso-motor disturbances, such as nævi, telangiectasis, varices, angiomata, etc., and one case the phenomenon of "tâches érectiles, cuticulaires diffuses."

There is, therefore, in my opinion, sufficient evidence to warrant a strong suspicion that the *fons et origo* of this rare and curious condition is a pathological activity of certain nervous structures which excites an abnormal growth in the parts they control. And it seems probable that in the case here recorded the nervous structures primarily affected are those which we may reasonably suppose to have some influence on the growth of the right side of the body, namely, the cortical cells in the parietal region of the left side of the brain. Such an hypothesis will explain not only the right-sided gigantism, but also the enlargement of the left half of cranium in the parietal region.

One other possible explanation deserves mention. In some respects unilateral gigantism resembles acromegaly. Acromegaly is a disease of adult life, but at least four cases are recorded under the age of 10 years. This curious disease is characterised by enlargement of the whole of the body, head, trunk, arms and legs. The face shows much more obvious enlargement than does the vertex; this was also noticed in my case of unilateral gigantism. The overgrowth in acromegaly affects both soft tissues as well as bones. Small cutaneous tumours, sessile or pedunculated, are commonly present in cases of acromegaly, and, as already mentioned, similar tumours are found in my case. Supposing the subject of this paper presented the phenomenon of gigantism on both sides of the body instead of only on one side, I think few would have objected if the diagnosis of acromegaly had been made. In many cases of acromegaly the pituitary body has been found to be much enlarged after death, and it is generally supposed that acromegaly is due to either an arrested, increased, or perverted internal secretion of the pituitary body. It would be difficult to explain unilateral gigantism as the result of a perverted internal secretion of the pituitary body, for such internal secretion, on leaving the pituitary body, rapidly reaches the general circulation, and will be carried equally to both sides of the body. However, although there is strong evidence that the enlargement of the pituitary body is the essential lesion of acromegaly, the evidence does not amount to a proof. I am inclined to believe that acromegaly and unilateral gigantism are so nearly related that they may both be due to a similar fundamental cause, and a close study of the pathological appearances in unilateral gigantism may solve the problem of both of these conditions.

A RECORD OF POST-MORTEM EXAMINATIONS, WITH CLINICAL NOTES.

By H. Stacy, M.D., Ch.M. (Syd.), Assistant Surgeon, late Resident Pathologist, Sydney Hospital, Sydney.

In recording these clinical notes of about 150 post-mortem examinations, I must first express regret at not being able to add the notes of 50 or more cases, the notes of which have been mislaid.

The examinations were conducted in the Sydney Hospital Mortuary during 1901, when I held the position of Resident Pathologist. I am indebted to Dr. Jamieson, the director of the department, for his kind permission to make use of the records.

I have, whenever it has been possible, collected from the case sheets the temperature, pulse and respiration rate, but not much reference will be made to the latter, as it is completely overshadowed in importance by the two former. The frequent absence of temperature in diseases, in which we have all been accustomed to almost invariably expect it, is to me the most striking fact about the results; it occurred so often that I am convinced that temperature has hitherto been given too great prominence. In saying this I am well aware that the cases with which I am dealing are all fatal ones, and consequently not fair examples from which to make all-round deductions; yet I have seen the same thing so often in non-fatal cases, that I am sure the statement applies to both classes. Consequently I would not go to the extent of saying that the absence of temperature is a fatal sign; it may often be ominous, but certainly not fatal.

The pulse I look upon as a much better guide to the condition of the patient. Time after time in the subjects on which these post-mortems were done, the pulse was rapid where the temperature was normal; and I have no doubt that I could record even more instances were it not for the bad practice that prevails in hospital of not recording the pulse unless the patient is on a four-hour chart.

The pulse has the one disadvantage of being subject to emotional influences, so that its rate may be temporarily increased in a nervous patient by the presence of the doctor.

Now as to its advantages:—

(*a*) In a case where the evening temperature is high, yet the morning normal, the pulse, though it falls somewhat, generally remains considerably above normal. This is of practical importance, since we so often see our patients in the morning only.

(*b*) In patients who are depressed by some chronic disease, especially Bright's disease and tuberculosis, the temperature is frequently not raised, whereas the pulse is almost invariably so.

(*c*) Frequently in inflammatory affections, even without co-existing chronic disease, there is a rapid pulse, but no pyrexia to speak of.

Enteric Fever. — *Temperature.* — All the cases showed a high temperature, which remained up to time of death. As to the way in which it was affected by complications, one case of "perforation" showed the usual fall to subnormal, with subsequent rise; another showed no fall whatever, but about ten hours later pulse rose from 108 to 160. "Pneumonia" had no distinct effect. *Pulse.*—In most cases well over 100, thus agreeing with the clinical rule that "a case of typhoid in which the pulse is over 100 is usually bad." *Respiration.*—Slight increase with the rise in temperature, but not marked except in the cases complicated by "lobar pneumonia" (of which there were two, both adults). The rate was apparently unaffected in the single case, complicated by "broncho-pneumonia" (a boy).

Broncho-pneumonia (19 cases, mostly septic). *Temperature.*—A few resembled lobar pneumonia in having a high temperature, but the majority (including both septic and non-septic cases) showed for the most part a very slight rise. This was especially noticeable in those cases contracted during an operation about the mouth for malignant disease (a preliminary tracheotomy not having been done). One case with a temperature is worth recording in detail:—A man of 56 was operated on for epithelioma of the tongue; previous to operation his temperature was normal; a few hours after it rose to 102.2°; fell again in the morning to 98.8°, but again rose to 100°, at which he died (36 hours after the operation). The clinical diagnosis was shock, septic broncho-pneumonia not being dreamed of.

The anæsthetic administered in all these mouth cases was chloroform. I mention this in order that the advocates of chloroform may not put the death down to ether pneumonia, as they are so apt to do; of course the particular anæsthetic had nothing whatever to do with it; the administration of it may have, as in the absence of a preliminary tracheotomy it is necessary to keep the patient lightly under, in order that the fluids from the mouth may go down the pharynx instead of the larynx, as they do with the reflexes absent. Several other cases also showed a moderate rise (100.4°) the day after operation, followed by a decline to normal, at which they either remained or rose again slightly.

Pulse.—Almost invariably increased. Even with a normal temperature the pulse was generally from 110 to 130, and more in those with a high temperature. *Respiration.*—As a rule rate increased slightly more than temperature for corresponding case; only a marked rise in those cases with pyrexia. *Kidneys.*—No constant relation. Some cases with interstitial nephritis showed a temperature, while others did not.

Lobar Pneumonia (27 cases). *Temperature.*—In a great many cases the temperature during the last few days of life was much lower, frequently falling to normal or subnormal. The entrance of pneumococci into the blood had no constant appreciable effect; in some cases falling, in others remaining unaffected. The epidemic of 1901 was a very severe one, and was remarkable for the number of cases (7 or 8) which showed scarcely any pyrexia; in some, but not in all, this could be explained by the fact that they were brought to hospital within a day or two of death. In a big proportion of those cases with only slight or no temperature, a large area of lung was involved, though on the other hand some cases with marked pyrexia also had a large area of consolidation. The highest temperature recorded, viz., 106°, was in a case complicated with pneumococcal meningitis. The lowest, viz., 96.2°, was in a man of 50 with pneumococcal septicæmia, pericarditis and peritonitis, in addition to the pneumonia; he died shortly after admission. No distinctions could be noted in the temperature of apical and basal consolidation. *Pulse.*—Almost invariably between 110 and 130. *Respiration.*—Generally between 30 and 50 per minute, even in those cases with only slight pyrexia. *Kidneys.*—In nearly every case in which there was very little temperature there was interstitial nephritis, whereas in most of the cases with pyrexia the kidneys were comparatively healthy (except perhaps for cloudy swelling, due to the pneumonia itself).

Malaria.—Two cases, both complicated by pneumonia. *Temperature.*—In one was hectic, but of the reverse type, 105° in the morning and about normal in the evening; during the last few days of life the hectic type not so marked. In the other case the temperature was 96° on admission; between that and death, three days later, 102°. The malarial parasite was found in considerable numbers in the blood of both these patients.

Acute general miliary tuberculosis.—One case. *Temperature.*—Continuous; between 99° and 102°. *Pulse.*—Between 90 and 100. *Respiration.*—24 to 36 per minute.

Acute tuberculosis of lungs.—Eight cases. Nearly all in form of tubercular bronchopneumonia supervening upon chronic phthisis. *Temperature.*—Almost all had no pyrexia, except slightly at the onset of the acute trouble, but where tubercular meningitis was present in addition the temperature was high. Where there was no pre-existing phthisis and in the solitary case of the lobar type it was also high. *Pulse.*—Not reported sufficiently often to generalise. In the case with tubercular meningitis it was between 90 and 100.

Chronic tuberculosis of lungs.—Seven cases. *Temperature.*—Subnormal to normal in a few cases; in most a moderate rise to 101°. *Pulse and respiration.* — Not recorded. *Kidneys.*—In five out of the fifteen cases there was some interstitial nephritis; in three, waxy degeneration.

Gangrene of Lung.—Two cases, both in old people. *Temperature.*—In one between 99° and 103°, with corresponding increase in respiration rate; in the other, normal and sub-normal.

Empyema. — Five cases. *Temperature, pulse, and respiration* in most cases were raised; one exception being a large tubercular empyema. In one the pulse was only 90 (the patient had arterio-sclerosis), and in another the respirations were only slightly increased.

Bronchiectasis.—One case. *Temperature.*—Normal.

Acute Septic Peritonitis. — Eight cases. Peritonitis following (*a*) perforation of duodenal ulcer; (*b*) septic endometritis and salpingitis; (*c*) perforation of carcinomatous bowel, were accompanied by high temperature and pulse rate, whereas other cases following (*a*) perforated duodenal ulcer; (*b*) perforated tubercular ulcer; (*c*) mitral stenosis with septic infarcts of lung, and empyema, apparently septicæmic; (*d*) perforation of an hydatid cyst, which had previously been opened and drained externally, gave a normal temperature. *Kidneys.*—Chronic nephritis present, both in some of those with pyrexia and in some without.

Appendicitis. — One case — gangrenous. *Temperature.*—Though 102° at the beginning and end of the illness, yet normal for 36 hours in the middle, presumably at time of perforation. *Pulse.*—92 to 124. *Respiration.*—24 to 36.

Intestinal Obstruction.—A case of volvulus. *Temperature.*—Practically normal throughout; several rises to 99° and 99.4°. *Pulse.*—96. *Kidneys.*—Chronic interstitial nephritis present.

Suppuration.—Six cases. Four cases of cerebral and intra-abdominal suppuration were accompanied with pyrexia and rapid pulse, but multiple abscess of the liver following septic cholangitis from impacted gallstone gave practically a normal temperature, there being only three rises to 99.8°. Pulse rate not recorded. Another case of suppuration in the neck and mediastinum of a man, aged 62, following an operation for carcinoma of the jaw, was accompanied for the greater part of the time by a normal temperature; the pulse rate, however, was increased throughout; the patient had cirrhosis of the kidneys.

Septicæmia.—One case—staphylococcal—in a man of 80, with arterio-sclerosis. *Temperature.*—Slightly raised, but never more than 100°.

Septic Endocarditis.—One case. *Temperature.*—At first continuous like that of typhoid; later on hectic; lower than the usual the last few days of life. *Pulse.*—100 to 160.

Hæmorrhage.—*Cerebral.*—Seven cases, all in males, and nearly all had interstitial nephritis. *Temperature.*—Highest recorded, viz. 106° (with a pulse of 140, and respiration 48) in a cortical hæmorrhage; it was preceded by a subnormal temperature. It was approximately normal in several cases in which the hæmorrhage was in or around the lateral ventricle. The one case of meningeal hæmorrhage (subdural) was slightly below normal. *Pulse.*—Rate not recorded in most instances. *Intra-peritoneal*, from rupture of tubal gestation.—One case. *Temperature.*—97.6°.

Fracture of Skull.—Five cases. *Temperature.*—In three cases of fracture of the base, with accompanying laceration of the brain, it was usually between 100° and 102°. In two cases of fracture of the vaulti, with meningeal hæmorrhage, it was between 103° and 105°. *Pulse.*—In most cases (both with laceration and with hæmorrhage) rapid, except possibly in the early stage of shock.

Cerebral softening.—Three cases. *Temperature.*—Normal to subnormal; generally rose to 103° or more near the end.

Cerebellar softening.—One case. *Temperature.*—Raised throughout; from 100° to 105°. *Kidneys.*—Chronic nephritis in one; in the other three, healthy.

Epidemic Cerebro-Spinal Meningitis.—Four cases. *Temperature* was frequently normal for six or seven days; at other times between 98° and 101°, but generally rose to 103° or higher shortly before death. *Pulse.*—In one normal for a time; in the others from 100 to 130. *Respirations.*—Varied from 24 to 36 per minute. *Kidneys.*—Healthy.

Hydrocephalus.—One case. *Temperature.*—Normal previous to aspiration of 1 oz. of fluid; 102° a few hours after. *Pulse* and *respiration* high.

NEPHRITIS.

Acute nephritis.—One case of acute supervening upon chronic; had no temperature; age 36.

Catarrhal nephritis, with interstitial pancreatitis, showed slight pyrexia.

Chronic nephritis.—Normal; in two cases dying of heart failure.

Uræmia.—Eleven cases. *Temperature.*—Out of eleven cases seven had decided pyrexia varying from 100° to 106°; two were normal and two were subnormal. *Pulse.*—Between 100 and 120 in six out of the seven cases of high temperature in which it was recorded; not marked in the others.

Suppurative Pyelo - Nephritis. — Three cases: two due to enlarged prostate; one, a man of 60, gave a high temperature and pulse rate. The other during a period of six and a half weeks in hospital showed a very occasional rise of temperature to 100° and 101°; normal for the most part; the pulse was also mostly normal. One case of calculous pyelo-nephritis was in for three days, temperature being 97°.

Cardiac Disease. — Five cases. *Aortic disease.*—Normal as a rule; several died with a slight temperature. *Fatty heart* and *dilated heart* were subnormal.

Aneurism.—Three cases. *Temperature.*—Normal.

Puerperal Pyæmia.—One case.

Enteritis and Colitis.—Two cases.

Septic Endometritis.—One case.

Acute Infective Ostoe-Myelitis.—Two cases.

All gave a high temperature and rapid pulse.

Malignant Growths.—Six cases. *Temperature.*—Normal; frequently sub-normal; in some cases a slight rise now and again. One patient with malignant growth of sternum and liver had no pyrexia until two days before death, when it rose to 105°.

Cirrhosis of Liver.—One case. *Temperature* between normal and 100°.

Hydatid.—One case, A suppurating hydatid of liver which ruptured into pleura had a temperature of 97°, but a pulse of 108 and a respiration rate of 50 to the minute. *Kidneys* were healthy.

Poisoning.—Two cases. *Temperature.*—In the mercurial case mostly normal; in the opium case 101.4° on admission, soon after 106°.

(Read before the New South Wales Branch of the British Medical Association.)

ETHYL CHLORIDE AS A GENERAL ANÆSTHETIC.

By **St. John W. Dansey, M.B., Ch.M. (Syd.), Registrar and Anæsthetist, Royal Prince Alfred Hospital, Sydney.**

For the past four months kélène or ethyl chloride has been used at the Royal Prince Alfred Hospital with highly satisfactory results as a general anæsthetic by itself for short minor operations, and also for initiating the narcosis of ether.

For producing anæsthesia of short duration ethyl chloride has several advantages over nitrous oxide gas, viz:—1. It is, on the whole, quicker in the initiation of anæsthesia. 2. There is none of that disturbing duskiness which is more the rule than the exception with the administration of gas. 3. Ethyl chloride gives a much longer narcosis—about 1 to 2½ mins. 4. The apparatus necessary is so easily portable as compared with that of gas. 5. Ethyl chloride is cheaper.

With nitrous oxide, ethyl chloride has the following in its favour:—1. It is not at all unpleasant to the patient. 2. The recovery from narcosis is rapid, and there are no subsequent ill effects. 3. Ethyl chloride is stimulating rather than depressing to the circulatory and respiratory centres.

I have given successfully and without incident ethyl chloride by itself in over 60 cases for removal of adenoids, opening abscesses, teeth extractions, exploratory punctures, etc. The method adopted is a slight modification of that suggested by Hugh Kitchin, M.A., M.B., B.C., in the *British Medical Journal*, December 26th, 1903. An ordinary Clover's ether inhaler is employed, the usual ebony plug at the side being replaced by one with a small hole eccentrically placed downwards, into which fits a small conical peg. The usual rubber bag is used, or, what is more cleanly, a bag made of fine silk lightly wrung out of water. To fill the inhaler, the indicator is turned to 0, and the small peg removed; through this hole about 4 c.c. of ethyl chloride are sprayed into the ether reservoir. Owing to the high volatility of ethyl chloride, it is necessary to see that the inhaler is as airtight as possible, and also to charge it just previous to the administration. The patient is told to take a deep breath, and the mask is fitted close to the face in the usual way; the indicator is then rapidly turned till it points to F or thereabouts. After the first few respirations, the breath is generally held for a short time, but regular deep breathing quickly returns. At first the pulse is slightly slowed, but it soon regains its former rate, and remains full and steady throughout the administration; the colour keeps remarkably good right up to deep narcosis; spasm and excitement are very rare. The conjunctival reflex soon becomes lost, and the pupil rapidly dilates. When the pupil is well dilated and the conjunctival reflex has disappeared, the patient is sufficiently anæsthetised. Should the operation be one where there is no necessity for the removal of the mask from the face, then by admitting an occasional breath of air as the pupil becomes very widely dilated, the duration of the narcosis may be much prolonged. I have thus with a single filling of the mask produced well-marked anæsthesia for over five minutes. After this prolonged anæsthesia there is a tendency to retching, and in one case vomiting occurred, but here, unknown to me, the patient had a light meal about an hour previously. In anæsthetising with ethyl chloride the chief point to bear in mind is the very rapid transit through the second and third stages of anæsthesia: your patient may be breathing quietly with well marked conjunctival reflex and small pupil, yet after two or three more respirations, it may surprise you to find the conjunctival reflex lost and the pupil right out.

It is now our routine to initiate the narcosis of ether with ethyl chloride, for the following reasons:—1. It is more pleasant to take than ether direct. 2. Etherisation is more rapidly induced—average time about 2 to 3½ minutes. 3. Spasm and excitement, which is frequently met with in the initial stage of etherisation, does not occur. 4. In plethoric and obese patients, owing to the quick smooth onset of anæsthesia with no duskiness, the subsequent etherisation is much simpler and more satisfactory. The method of administration is the same as with ethyl chloride alone, except that when the patient is fully under, the indicator is turned back to 1, and ether in sufficient quantity is quickly poured into the reservoir. The indicator is then worked round again as quickly as is consistent with the breathing of the patient. As a rule the rapid turning of the indicator to F makes no difference to the regular respiration; but sometimes, owing to air being freely admitted during the charging of the inhaler with ether, the breathing becomes catchy as the ether vapour is freely inhaled; in such cases the indicator must be more slowly and cautiously turned to F.

The Clover's inhaler best suited for this combined administration is one where there are two small glass caps at either side of the dome, which screw off to admit ether—bayonet socket caps would be still quicker and easier for manipulation.

As yet I have used ethyl chloride previous to chloroformisation in one case only, a man of 71 years of age, with marked aortic regurgitation, the apex beat being 1¼ in. external to the nipple line in the 6th interspace, and the urine containing a cloud of albumen. With no excitement or struggling whatsoever, he passed into the anæsthesia of chloroform, and was in the operating theatre, where suprapubic cystotomy was done, some 3½ minutes after the commencement of the administration.

I may state that last year ethyl chloride was tried in the semi-open mask sold for the purpose, with very unsatisfactory results. It often took in adults about half a vial (25 c.c.) of ethyl chloride to produce a very imperfect degree of anæsthesia after 10 to 15 minutes' administration.

Surgical Appliance Aid Society.—At the sixth annual meeting of the Sydney Surgical Appliance Aid Society, the directors' report stated that the year's work of the society had shown the value of such an institution. The society had received £25 from the Hospital Saturday Fund, and the Government had granted £50 to help the work. The adoption of the report was moved by Sir James Graham, and agreed to. The following officers were elected:—President, Sir James Graham; vice-presidents, the Lady Mayoress, Lady Harris, and Mr. W. R. Campbell, M.L.C.; hon. treasurer, Mr. W. B. Platt-Hepworth; hon. secretary, Miss E. M. Nelson; hon. medical officers, Drs. E. H. Binney and R. H. Jones; directors, Mesdames H. Dixson, A. W. Meeks, R. A. Peach, W. P. D. Benjamin, W. S. Suttor, and E. C. V. Broughton, Misses M. Harris and Deas-Thomson, and Messrs. E. C. V. Broughton and H. B. Nelson.

NOTES ON AMERICAN HOSPITALS.

By S. B. McGahey, late Matron and Superintendent of Nursing, Royal Prince Alfred Hospital, Sydney.

In such a progressive and up-to-date country as America, one naturally expects hospitals to be as modern in point of construction and equipment as some of the other buildings met with there, and in this respect a visitor's expectations are fully realised. Where the hospitals have not been built within the past 20 years, the Boards of Directors have done their utmost to modernise the fittings and furniture. In modern hospitals no expense has been spared in order to have everything as perfect as it is possible to make it.

Sites of Hospitals.—Most of the hospitals occupy fine sites, notably the Victoria Hospital (Montreal) and the Johns Hopkins Hospital (Baltimore). In New York City, ground space being limited, the roof is sometimes made use of where airing ground around the hospital is not available. These roof gardens are approached by means of elevators, and upon clear days the view is most comprehensive. Here the patients are to be seen, comfortably seated, basking in the sunshine.

Walls of Modern Hospital Wards.—In most cases the walls of the wards and corridors were painted, but in a few of the hospitals there was a dado of pretty tiles about five or six feet from the floor. This gave the wards a very bright and cheerful appearance. In one hospital in New York the walls from floor to ceiling were done with octagonal tiles.

Floors.—The floors were chiefly made of wood, stained and polished. In some the ward floors were tiled, whilst in others terazzo was used. Terazzo can be done in various colours. It is a composition floor, the basis being cement, mixed with very small pieces of coloured marble, and then finished off with a very well polished surface. This terazzo flooring is done by Italian workmen and is not very expensive. The only drawback to it is its tendency to crack, but from experience it has been found that slabs of marble introduced at certain intervals prevent this. Parquetry flooring, highly polished, was used in some of the very wealthy hospitals.

Size of Wards.—The wards were a convenient size for working; some contained 14 beds, others from 18 to 20. In a few hospitals there were circular wards which accommodated about 16 patients. Through the centre of these wards ran an air shaft, which interfered with the view and did not improve the appearance of the ward. At the end of some of the oblong wards were sun-rooms. Into these the patients are taken to get as much sunlight as possible. One pretty children's ward had such a room as this, where the children who were up during the day could amuse themselves. This part of the ward was shut off by means of a small barrier from the remainder, and by such an arrangement the nurses were able to keep the ward more tidy.

Furniture of Wards. — The furniture was chiefly made of iron and glass. The ward tables at some hospitals were of pretty stained wood, such as bird's eye maple, and over the plate was a sheet of glass about ¼ in. thick and bevelled at the edges. The dressing trolleys were of iron and glass and of various designs. Small bedside tables with iron frames and two glass shelves were placed convenient to each bed; these have replaced the old-fashioned wooden lockers. The patients' belongings were kept in a cupboard with pigeon-holes quite near the ward; by such an arrangement there can be no likelihood of visitors secreting articles of food forbidden to the patients, and, moreover, the atmosphere of the ward must be improved to a certain extent. The chairs were of iron, enamelled in white and easily kept clean. Even the screens in some of the wealthy hospitals were of aluminium and of special design. The medicine cupboards were unique; they stood in the centre of the wards, and the contents could be seen from all sides. The framework was of iron or some such wood as oak or teak, with bevelled glass panes. There was no superfluous furniture in any of the wards or corridors. The bedsteads were of iron with wire-woven mattresses, on which were the ordinary hair mattresses. In a large hospital in New York there were no ordinary mattresses; three piles of a blanket were substituted instead, and these were firmly secured at each corner by means of a safety-pin, which fastened the sheet to the blankets. The patients, on being asked if they felt comfortable on this kind of mattress, expressed themselves very well pleased with them.

Private Wards.—There are private wards in connection with several of the general hospitals in Canada and the United States. Some have accommodation for as many as 35 and 40 private patients. These, like the general wards, are suitably furnished and are most comfortable. The senior nurses do duty here, and if there are not sufficient on the staff to meet the requirements of the patients in these wards the services of graduate nurses are obtained from outside. The private patients pay four or five guineas weekly to the hospital, independent of the physician or surgeon's fee.

Operating Theatres.—The operating theatres, with few exceptions, were very modern. In some of the recently built ones there was a sterilising room and an instrument room off the arena, and convenient to these a dressing-room for the surgeons and assistants. Close to the operating theatres were recovery rooms, with accommodation for one or two patients in each. Into these rooms some of the patients were taken for a time after the operation before being removed to the wards. In order to heat these operation beds an electrical sheet can be put in and the electricity turned on for a short time, after which the bed is uniformly warmed from top to bottom. There were no fixed basins in the arena of any of the modern theatres; these were all fitted up in an adjoining room. Stands on ball-bearing castors, with receptacles for basins for saline solution, etc., were wheeled quite convenient to the operators. One operating theatre in New York had the walls, ceiling, floor and seats all made of marble.

Technique at Operations.—I was privileged to be present at several operations, at all of which asepticism was carried out in its entirety. The operators, assistants, and nurses were gowned in white, and all wore caps and indiarubber gloves. Nitrous oxide gas was given previous to the administration of ether. In the leading hospitals the nurses are taught how to manage anæsthetics. In one hospital I saw a nurse come forward and take charge of the anæsthetic previous to the completion of the operation, when the anæsthetist left to start etherising the next patient. Some of the patients were finally prepared for operation on the table by an assistant, and in this, as in the method of handwashing, there was a variety of methods. Tincture of green soap is used in many hospitals for cleansing the skin, followed by the application of a bichloride of mercury pad. Condy's fluid and oxalic acid, ether, and turpentine are also used. I heard of one surgeon who preferred to use equal parts of chloride of lime and carbonate of soda rubbed into a smooth paste for cleansing his hands after they had been well scrubbed with the tincture of green soap and water. Sterile saline solution is chiefly used at operations; in some of the theatres were to be seen dozens of flasks containing sterile saline solution. This is sterilised by the fractional method, and kept during operations in an iron cupboard at a temperature of 99° F. by means of a gas jet underneath.

Ventilation.—The plenum system of ventilation, or a modification of it, is adopted in the American hospitals. In some of the older institutions the outlet for impure air is in the floor underneath the beds, but in the more recent buildings it is in the wall. The air in cold weather is warmed by means of radiators, which can be regulated at will. In the basement of one large hospital I saw a network of pipes for conveying the pure air, which had been filtered and warmed before it was taken to the wards and operating theatres; and another for conveying the impure air away from the wards, which eventually passed over the furnace fire, thereby destroying all germs contained therein.

Lighting.—Electricity is used throughout the hospitals and nurses' homes. It is also used in some for cooking and working the lifts.

Diet Kitchens.—In connection with the general wards are diet kitchens. Here the trays are prepared for the non-paying patients' meals. Every patient has a white enamelled tray on which his meals are served by the nurses. The nurses do all the cooking for the private patients under the guidance of skilled teachers. The dishes cooked for them were daintily served and most appetising.

Nursing.—During the past decade in America nursing has made rapid strides; nurses undergoing training there have every facility afforded them to acquire a thorough knowledge of their profession. The period of training is three years, in which are included the months spent in the preliminary training school, where such a school exists. At Johns Hopkins Hospital there has been a preliminary training school for the last two years. Here pupils are received for a period of six months, during which time they receive instruction in several subjects, such as the outlines of general nursing, invalid cookery, bandaging, domestic economy and the preparation of surgical dressings. At the end of this period they are examined, and those who have passed the examinations and given satisfactory evidence of fitness of disposition and temperament for nursing work are sent to the wards for further work.

In America there is no scarcity of applicants; preference is given to college girls, who are considered in other respects suitable candidates. American women are enthusiastic about their work, and when they take up any specialty they usually do so in a most whole-hearted manner. This characteristic is strongly marked in the nursing ranks. One had only to attend the meetings at the Buffalo Nursing Congress, which was held in 1901, to notice how keenly interested the nurses were in all matters of importance connected with their work. In the leading training schools obstetric nursing and massage are included in the nursing curriculum. American nurses frequently go to Sweden on completion of their general training and spend a year, or longer, getting a thorough knowledge of massage. At Teachers' College, Columbia University, New York, trained nurses desirous of taking a course in hospital economics can do so as vacancies occur. In this course, which covers a period of eight months, trained nurses if considered suitable are prepared to take the positions of teachers in training schools for nurses and superintendents of hospitals. The cost for such a course is £60.

Pupils in training receive very little remuneration, if any, but when they become graduates and go out in the capacity of private nurses they get from £5 to £7 per week. Male nurses receive a higher fee.

There are Alumnæ Associations in America. The trained nurses from different schools have each their Alumnæ or Trained Nurses' Associations. The members meet at regular intervals to transact their business. At present the Alumnæ Associations are all working in the direction of State registration, which they expect to have shortly.

The majority of American nurses are good business women and clever as public speakers. These special traits one could not fail to notice when attending their meetings.

The courtesy shown me at the different hospitals and nurses' homes was very marked. At some of the hospitals, where I was received as an honoured guest, no trouble was spared to enable me to get all the information I required. My stay was made so pleasant that I found it difficult to sever my connection with such a progressive people, who had made my visit so enjoyable.

CLINICAL AND PATHOLOGICAL NOTE.

A CASE OF PRIMARY SARCOMA OF THE LIVER.

A FEMALE child, 3 years of age, was admitted into the Children's Hospital, Sydney, on April 5th, 1903, under the care of Dr. Angel Money. She was sent in with the diagnosis of possible leucocythemia. The history was that she had not been well for some time, but had been very much in her present condition for about 14 days.

On admission, the liver was enlarged, and a large mass could be felt below, but separate from it. The blood was examined and found to contain 3,500,000 red cells and 72,000 white cells. The child was very ill, and only lived about 48 hours after admission. The temperature on admission was 100 deg., but rose shortly before death to 103 deg.

Post-mortem.—A large round hæmorrhagic mass occupied the central and major part of the right lobe of the liver; it was very soft and contained several large clots of blood. The growth appeared to be white in colour when not altered by blood; it had no capsule, although its boundaries were fairly well defined. The growth was continued by a sort of isthmus into a large round mass (which was felt during life) lying parallel to and below the liver; this proved on section to be exactly similar in structure to the growth in the liver. The growth had also invaded the pancreas, the normal tissue being almost entirely replaced by it. The mesenteric and lumbar glands were also much enlarged, pink and fleshy. The bronchial lymph glands were very slightly, if at all, enlarged. The other organs in the body were healthy. The bone-marrow was not examined.

Histology.—Sections were cut from portions of the growth in the liver, pancreas and glands, and stained with hæmatein and eosin. They all showed a similar structure, viz., loosely packed round cells, fairly large, with large well stained nuclei, and generally scanty protoplasm. The nuclei of the cells were mostly round, but assumed all sorts of shapes. There were here and there bands of fibrous tissue, but not many. There was no definite capsule, although in parts the liver cells seem to have become flattened out so as to look almost like connective tissue; in other parts the growth was invading the normal liver substance, groups of sarcomatous cells lying between columns of normal liver cells.

Blood films fixed with heat, and stained with Ehrlich's triacid stain, gave the following result:—*Lymphocytes*, small, 75 per cent.; *lymphocytes*, large, 3 per cent.; *polynuclear*, 10 per cent.; *eosinophiles*, 1 per cent.; *myelocytes*, 11 per cent. In counting 500 leucocytes, 50 normoblasts were seen, but no megaloblasts.

Remarks.—This case is worth recording on account of the rarity of primary sarcoma of the liver. The few cases recorded have occurred for the most part in children. The histological appearances in this case were peculiar, the cells being much larger than those usually seen in a round-celled sarcoma; they were much more like the cells usually found in a carcinoma. The blood condition is interesting. The leucocytosis is high, but even higher counts have been found in other cases of malignant disease of the liver. The large percentage of nucleated red cells and of myelocytes strongly suggests a secondary infection of the bone-marrow; unfortunately the films were not examined till after the post-mortem examination was made; the bone-marrow was not examined, as there was no reason to suspect any lesion of it. The large increase in the lymphocytes is accounted for by the widespread infection of the abdominal lymph glands.

I am much indebted to Dr. Donald Wallace, the Resident Medical Officer at the Children's Hospital at that time, for assistance in the examination of this case; the blood counts were made by him.

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MIRROR OF HOSPITAL PRACTICE IN AUSTRALASIA.

ROYAL PRINCE ALFRED HOSPITAL, SYDNEY.

A Case of Rupture of the Liver.

(Under the care of Mr. H. Critchley Hinder, Honorary Surgeon.)

A lad, aged 15 years, was returning from work on his bicycle when he fell in front of an empty wood van, the wheel of which passed over his back while he was lying face downwards. He was picked up and brought to the Royal Prince Alfred Hospital.

On admission his pulse was 98 and his temperature 96°. He was pale, restless, and he breathed with short shallow respirations. There was very slight abdominal movement to be observed; in fact, the lad looked desperately ill. On palpation his abdomen was found to be rigid and tender all over. There was very marked tenderness over a point in the mid line about two inches below the mid sternum. The patient felt cold and clammy. On percussion his whole abdomen seemed to be somewhat dull, but it was not possible to swear to the presence of fluid. Two hours afterwards I opened his abdomen near the middle line above the umbilicus and discovered bright blood loose all over his abdomen. His stomach was distended, and this made the task of discovering the source of the hæmorrhage somewhat difficult. However, on pressing down the stomach and intestines I found a deep gaping rent in the mid line of the liver. The rent presented two broad triangular surfaces with the apex near the ribs anteriorly and the base back towards the vena cava. From this surface when exposed the blood poured out. I snatched up a large gauze pad and pressed it into the wound. This was held there by my assistant until a large curved needle threaded with catgut could be passed deeply through each side of the exposed rent. Three such sutures were passed and tied. This was sufficient to control the bleeding. The abdomen was then washed out with saline solution and more blood was seen to well up from the splenic region; in fact, the washing out seemed to increase it. An examination showed a small cut in the lower end of the spleen and a clot of blood in the intestinal mesentery, which the stirring ablution had caused to ooze. The lad had lost a considerable amount of blood. A sausage-shaped piece of gauze was passed down so as to lie along the sutured rent in the liver in order to act as a drain, and the abdominal wound was sewn up. I certainly thought that there was little hope for the boy.

The whole of the next day he vomited continuously, while his pulse varied between 140 and 160. His abdomen was greatly distended. His bowels acted slightly after enema during the night. Nevertheless, next day there was no improvement. Inasmuch as drainage was not as active as I had expected, the gauze was taken out and was immediately followed by a free flow of serum and bile. Fresh gauze was placed in the cavity and much relief was obtained. From this time daily improvement was noticeable. Bile and serum continued to flow for a few days longer, and the lad is now quite well.

So deep was the rent and so free the flow of blood as soon as the part was disturbed that I had but little hope, and, in fact, I was very much afraid that the lad would die on the table. I am indebted to my house surgeon, Dr. Lethbridge, for the notes of the case and also for his great care and attention to the patient during his after treatment.

BERGMANN, BRUNS & MIKULICZ'S SYSTEM OF PRACTICAL SURGERY, complete in five Imperial octavo volumes, containing over 4000 pages with about 1600 illustrations in the text and about 110 superb full page plates in colours and monochrome, price, complete, £6 15s. This work is one of exceptional importance, and will be completed within the next three months. Subscribers' names are now being booked by L. Bruck, Medical Bookseller, Sydney.

REVIEWS AND NOTICES OF BOOKS.

A Guide to Urine Testing for Nurses and Others. By Mark Robinson, L.R.C.P., L.R.C.S. Second edition. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co. 1904. Price, 1s.

The fact that this little book has reached a second edition would seem to prove that it meets a want which the author was induced to believe really existed for a compilation of the simpler tests and facts concerning the urine, for the use of nurses. The author gives some few introductory remarks about the secretion of the urine and its principal physical characters, and then details the common tests applied for albumin, sugar, blood, bile, pus, and the various crystalline deposits. A useful addition to the description of these tests is an account of the various fallacies to be avoided in applying them. The book is reliable and useful for the purposes indicated.

G.E.R.

A Pocket-Book of Clinical Methods. By Chas. H. Melland, M.D. (Lond.), M.R.C.P., Physician to the Ancoats Hospital, Manchester. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co. 1903.

At the present day clinical physiological chemistry is becoming more and more important in the diagnosis of disease, and hence the necessity for small handbooks which will serve as guides for the performance of such tests as are practically possible by the ordinary student and medical practitioner. This little book has been written with a view to the requirements of students in the clinical laboratory, and hence is not overburdened with details of abstruse chemical processes, which can only be satisfactorily carried out by an expert chemist. Beginning with the sputum, the author gives directions for detection of the tubercle bacillus, the pneumococcus, the influenza bacillus, actinomyces, hydatids, etc. In the second chapter the examination of the gastric contents is dealt with, and we are glad to find that the author gives prominence to the dimethylamidoazo-benzene test for free hydrochloric acid. The chapters on the examination of the fæces and the urine are brief but good. We cannot, however, agree that Southall's ureometer can be satisfactorily used to give even approximately accurate results. The principle is, of course, correct, but the instrument, in our opinion, unreliable. The methods of examination of pus and blood complete the book, which, on the whole, will probably well serve the purpose indicated by the author.

G.E.R.

The "Nauheim" Treatment of Chronic Diseases of the Heart in England. By Leslie Thorne Thorne, M.D., B.S. (Durh.), etc. London: Baillière, Tindall & Cox. 1904. Pp. 53. Price, 2s 6d.

Dr. Thorne, who has devoted a large amount of time and attention to the Nauheim treatment for chronic diseases of the heart, has in this little book collected together his papers on the subject which have appeared in the medical journals. He is anxious to show that this line of treatment can be carried out without the necessity of a visit to Nauheim, and to this end gives minute details of the method of applying the baths, the dangers of their use, and the classes of cases which are suitable and unsuitable. He concludes with a short [illegible] of some cases he has treated, and gives dia-[illegible]wing the effects produced upon the size of the heart by the treatment adopted. This method of treatment deserves more attention than it has hitherto received, and this book will be useful in extending our knowledge of the subject and the application of the treatment. G.E.R.

Practical Points in Nursing. For nurses in private practice, with an appendix containing rules for feeding the sick, etc. By Emily A. M. Stoney, late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Mass. Third edition, thoroughly revised. 458 pages, illustrated. Philadelphia: W. B. Saunders and Co. 1903. Melbourne: James Little. Price, 9s.

The previous editions of this work have met with so much favour that it is hardly necessary to do more than to state that it has been thoroughly revised and brought up to date, in order to commend it to our readers. The book deals with medical, surgical and obstetric nursing, nursing of sick children, the physiology and descriptive anatomy of the human body, and also contains a valuable appendix, giving rules for feeding the sick, recipes for invalid foods and beverages, weights and measures, dose list, and a full glossary of medical terms and nursing treatment. It can be thoroughly recommended to the nursing profession. W.H.C.

The Medical Annual: A Year Book of Treatment and Practitioners' Index. 22nd year. Bristol: John Wright & Co.

We have much pleasure in welcoming the 22nd annual issue of the Medical Annual, since this work has come to be of invaluable assistance to practitioners in all departments of medicine. In this volume there is an excellent series of plates showing the character of the eruption in smallpox, and other excellent illustrations of the rash in scarlet fever, typhoid and typhus fever, and the other infectious diseases. But perhaps the most important new feature in this issue is the series of stereograms illustrating the surgical anatomy of the ear. These are published specially to illustrate the mutual relations of the structures dealt with during the performance of the mastoid operation. A simple but effective stereoscope is provided by the publishers for examining these plates. The advances made in the various forms of light treatment and with radium are fully dealt with. Altogether this volume is a wonderful compendium of all the latest advances in the various methods of treatment, and we can heartily recommend it to every medical practitioner. G.E.R.

Medical Monograph Series No. 8. Insanity in Every-day Practice. By E. G. Younger, M.D. London: Ballière, Tindall and Cox. Sydney: L. Bruck. 1904.

This small volume, which forms one of the Medical Monograph Series, comprises in about 100 pages a very useful sketch of the various forms of insanity, with their diagnosis and prognosis. It is not intended as in any sense a text-book or a reference book, since the information in it is necessarily brief and condensed; still it is sufficient to enable the general practitioner to form some idea of the nature of any case of insanity he may come across in the course of his practice, and the general line of treatment to be adopted—that is, whether the patient should at once be sent to a hospital for the insane, or whether home treatment for a time is likely to be successful. These are matters of great importance in general practice, and we think that this book will prove a reliable and valuable guide to a general practitioner in dealing with this class of case. G.E.R.

Saunders' Medical Pocket Formulary. By William M. Powell, M.D. Sixth edition; thoroughly revised. Philadelphia and London: W. B. Saunders & Co. 1904. Melbourne: James Little.

This edition contains 1844 prescriptions by medical authorities of many countries, and which are intended to treat nearly every sickness for which drugs can be employed. As the names of the ailments are given without any details to indicate what special symptoms call for the medicaments recommended, it rather reminds one of the fashion some patients have of passing round their prescriptions among their friends to cure them of ailments which they believe to be "just the same." If the prescription fails, the physician is discredited. For a well-educated practitioner we cannot see much value in this style of work. T.S.D.

Dispensing Made Easy. By Wm. G. Sutherland, M.B., Aberdeen. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent and Co. 1904.

For those of our medical brothers who may be unfortunate enough to need to dispense their own prescriptions there is much of very practical interest in this small work. It is not a mere casual collation, but resembles a sort of memorandum book, in which is set down in a compact and methodical manner a set of notes recording facts which the personal experience of the author has proved to be of everyday importance. The purpose of the work is unique, and we think has been on the whole satisfactorily attained. T.S D.

On Movable or Dropped Kidney: Its Relation to Diseases of the Nervous System. By C. W. Suckling, M.D. (Lond.), M.R.C.P., Consulting Physician to the Queen's Hospital, Birmingham, etc. London: H. K. Lewis, Gower-street. 1903. Price, 1s.

Some years ago Dr. Suckling expressed the opinion that many disorders of the nervous system were to be attributed to movable or dropped kidney. He has now published a small *brochure* containing reports of cases of migraine, melancholia, nervous exhaustion, etc., which he maintains proves his thesis, since after stitching up the kidney all the symptoms have disappeared, and the patient has recovered. There can be no doubt that movable kidney is a common cause of reflex disturbances; but we do not think that Dr. Suckling's cases have been reported with sufficient care, nor has sufficient time been allowed to elapse for the permanency of the cure to be established. The statement that "in many cases the attacks of severe pain just before or during the period (uterine crises), often accompanied with vomiting and faintness, are produced by a dropped right kidney falling on the uterus," is one that can hardly be taken seriously. G.E.R.

Our Exchanges.—We have received a copy of the new British publication devoted to the diseases of children, *The British Journal of Children's Diseases*, edited by Dr. George Carpenter, and published by Adlard & Son, Bartholomew Close, London. It contains some original articles from well-known authorities on children's diseases, reports of meetings of the Society for the Study of Disease in Children, and some extracts from the current literature on pædiatrics. This publication is well printed, and judging by the present number it should have a successful and useful career.

THE AUSTRALASIAN

MEDICAL GAZETTE.

SYDNEY, 20TH JUNE, 1904.

HOSPITAL FINANCES.

WE have on a previous occasion referred to the inadequate support which is afforded by the general public to the large general hospitals in the Commonwealth; and as time goes on it becomes more and more evident that if these institutions are to be maintained in an efficient state, some more regular and systematic financial support must be accorded to them.

The serious position in which the Brisbane Hospital committee is now placed emphasises this point. A deputation from this committee recently waited upon the Home Secretary, the Honorable P. AIREY, to lay before him the necessity of some relief being given to them at once. It was represented that the reduction in the endowment, the loss of £800 a year owing to the Government allowing the hospital £3000 extra as a base hospital instead of paying for the patients admitted on the Government ticket, the stopping of the Government payments for buildings, repairs, etc., and the falling off in the subscriptions owing to the adverse seasons, had resulted in their having an overdraft of over £6000. Accounts for April, including salaries and wages amounting to £700, were due, and could not be paid, as they had no funds to meet them. The bank had only consented to a further overdraft to enable them to carry on till the end of June on the understanding that the members of the committee gave their personal guarantee to this amount. This the committee did not consider a right thing for them to do. They had accordingly come to ask the Government to advance them £2000 to enable them to meet their necessary expenses until the end of June. In the course of the interview it was pointed out that the charitable contributions by the general public had not decreased, but that in consequence of there being a much larger number of charities the amount was now more divided up, so that each institution received less. The Government has granted an advance of £3000 to the hospital on the understanding that it is to be repaid in quarterly instalments from their revenue.

The position of affairs thus disclosed at Brisbane is exactly paralleled by the conditions existing among the Melbourne hospitals. The Government grants to charities have been reduced, and the hospitals, which were dependent to a large extent upon Government support, have felt the pinch considerably. In New South Wales, fortunately, so far, the pressure has not been felt so acutely; but, nevertheless, in view of the number of deserving hospitals and charities, it becomes increasingly evident that they must depend to a large extent upon Government aid, or they must cease operations. As has been pointed out, the so-called voluntary contributions to a large extent are the result of begging letters, circulars, and collectors, and not the voluntary gifts of the charitably disposed. We quite agree that the present system of hospitals and charities employing collectors to dun the same people year after year for subscriptions to their institutions, and paying them salaries and commission on the amount they collect, is a bad one. The special efforts to raise funds by means of balls, fairs, fêtes, etc., often end in, comparatively speaking, only small additions to the funds of the institutions, the amount thus raised being often only sufficient to tide the charity over two or three months of the year.

In view of the difficulty of maintenance, it is evident that some new arrangement should be made to secure economy in management and some centralising of the financial control. It was recently suggested in Melbourne that a Central Hospital Board should be appointed to control the hospitals entirely. It was urged that the special hospitals should be utilised to the full, and the general hospitals be relieved of their special departments and reserved entirely for general medical and surgical cases. Economy could thus be effected; and a revision of the outpatient departments might also result in considerable diminution in the expenditure there incurred.

The fact remains that the present position of the finances of most of the general hospitals in the Commonwealth is a most unsatisfactory one, and the voluntary system has proved to be a failure. The general feeling appears to be in favour of taxation of some sort or form, and we would again suggest the adoption of some tax on amusements as the least likely to be much felt by any one class in the community, and one which would yield a handsome revenue every year.

HUMAN AND BOVINE TUBERCULOSIS.

According to a cablegram which appeared in the *Sydney Morning Herald* on June 2nd, the Royal Commission on Tuberculosis has presented its report. This Commission was appointed in September, 1901, in consequence of the statements made by Professor Koch in his address before the International Congress on Tuberculosis held in London in July of that year. Professor Koch stated that, in his opinion, as a result of his experimental investigations there was a difference between tuberculosis as it affected man and the lower animals, and that the disease which affected the lower animals was not transmissible to man. It was evident that if these conclusions of Professor Koch were correct a good many of the by-laws and regulations which had been adopted with a view of preventing the conveyance of tuberculosis by means of infected milk and meat were unnecessary and created unnecessary difficulties for farmers and dairymen. In view, then, of the importance of the subject, the King appointed a Royal Commission, consisting of Sir Michael Foster, K.C.B., M.D., F.R.S., Professor of Physiology in the University of Cambridge; German Sims Woodhead, M.D., Professor of Pathology in the University of Cambridge; Sidney Harris Cox Martin, M.D., F.R.S., Professor of Pathology at the University College, London; John McFadyean. M.B., C.M., F.R.S.E., Principal and Professor of Pathology and Bacteriology at the Royal Veterinary College; and Rupert William Boyce, Professor of Pathology at the University College, Liverpool, to inquire and report with respect to tuberculosis—(1) Whether the disease in animals and man is one and the same; (2) whether animals and man can be reciprocally infected with it; (3) under what conditions, if at all, the transmission of the disease from animals to man takes place, and what are the circumstances favourable or unfavourable to such transmission.

According to the cablegram, the Commission asserts that after experiments on 200 bovine animals, it has come to the conclusion that the tubercular disease communicated to bovine animals by material of human origin in its broad general features, and in the histological details, is identical with the disease communicated to bovine animals by material of bovine origin. It would be mo t unwise, the Commission states, to legislate under the belief that the human and bovine tubercle bacilli specifically differ, or that the disease caused by one is wholly different to the disease caused by the other.

The Commission has not been unduly hasty in arriving at its report, and the names of the Commissioners are a sufficient guarantee that extreme care would be taken in arriving at any results from experiments on a subject which is of such extreme importance both from a commercial and public health point of view. This report will very materially strengthen the action taken by the Australasian Boards of Health in enforcing strictly eth regulations for the efficient supervision of dairies and dairy cattle, and for the inspection of all meat for human consumption.

We shall await with interest the full report of the experimental part of the Commission's work, which, we believe, was carried out near Standsted, in Essex, on two farms that were generously placed at its disposal by Sir James Blyth.

THE MONTH.

Canadian Medical Association.

The Canadian Medical Association is holding its annual meeting at Vancouver, British Columbia, from August 23rd to August 26th. The President and Executive Committee of the Canadian Medical Association extend to all members of the Australasian Branches of the British Medical Association a cordial invitation to be present at this annual meeting, and assure all who may go to Vancouver a pleasant and profitable visit and a hearty welcome. Special rates are arranged over the C.P.R., and those attending may take in the St. Louis Exposition at a slight additional cost. Excursions, entertainments and receptions will be provided. Addresses on various subjects will be delivered by leading members of the profession, and clinical and other papers discussed. Any who may desire to forward clinical or other papers should send notice at once to Dr. W. D. Brydone-Jack, the local secretary, Vancouver, B.C.

The Queensland Health Department.

We are glad to know that the Queensland Government has accepted the withdrawal of Dr. Ham's resignation, and that he will continue his important work as Commissioner for Public Health in Queensland. Dr. Ham is stated to have withdrawn his resignation on the understanding that the Government would provide him with an efficient department. It appears, however, that the Government has dispensed with 20 members of the rat gang, and that the Health Commissioner's hands are so tied that he is unable to efficiently cope with the work of rat extermination. At a recent meeting of the Board of Health the action of the Government was considered, and it was decided that the Commissioner should formulate a list of his requirements which were considered necessary for the satisfactory conduct of the Health Department. Meanwhile large numbers of plague-infected rats continue to be caught, fresh cases of the disease are reported in Brisbane, and an extensive outbreak of the disease seems inevitable unless the Government can be induced to see the folly of attempting to economise in so important a State department as that of public health. Both from a sanitary and commercial point of view it is absolutely necessary that active operations should be carried on with a view of completely exterminating all rodents, and enforcing such conditions in the buildings occupied as produce stores, etc., as shall prevent the harbouring of these animals. In the difficult position in which Dr. Ham has been placed, he has the sympathy and support of the chief health authorities of the other States of the Commonwealth; and we hope that his efforts in exterminating the disease will be crowned with success.

Venereal Diseases in Victoria.

At the meeting of the Medical Society of Victoria on May 4th last, a resolution was carried, on the motion of Dr. J. W. Barrett, seconded by Dr. Noyes, that "it is desirable that a statement of the damage done by venereal diseases be placed before the public by the Medical Society of Victoria." In the course of his remarks, Dr. Barrett pointed out that the tripod of human ills was cancer, tubercle, and syphilis. Both cancer and tubercle had attracted a great deal of public attention recently, and efforts were being made to extirpate them. He illustrated his remarks by reference to several cases under his care at the Eye and Ear Hospital, which showed the serious remote effects produced by syphilis. He suggested the advisability of the Society appointing a small committee to collect evidence from members, say, for

12 months, and at the end of that time to again bring the matter before the Society. He certainly thought that the public should be informed of the extent of the damage done by venereal disease, as it seemed ridiculous to quarantine a person who might possibly have been in contact with a smallpox patient in New Zealand, whilst an infected prostitute was permitted to disseminate a disease of at least equal virulence. After further discussion, Dr. Barrett promised to suggest something more definite as to the best method of informing the public at the next meeting of the Society.

A Farm Colony for Epileptics.

Some years ago the late Dr. Norton Manning read a paper before the New South Wales Branch of the British Medical Association, in which he advocated the open-air treatment of epilepsy, on the lines of the Craig Colony in New York No definite steps have yet been taken in this matter, but the importance of it can hardly be over-estimated. It has again been brought into prominence by an address by Miss Spence, of Adelaide, at a meeting of ladies at the Austral Salon in Melbourne last month. She stated that some 10 per cent. of all epileptics became really insane, but the question for consideration was what was to be done as to the 90 per cent. who were susceptible of improvement, or of mitigation of their lot? The younger cases were more susceptible to treatment than the older, and one indirect benefit from the grouping of the sufferers in farm colonies was that the patients could be better studied and classified. Another benefit was that in such colonies the sexes were strictly separated, and this most hereditary disease was prevented from being transmitted. Dr. G. H. Knight, Superintendent of the Connecticut School for Imbeciles, has found that in 60 per cent. epilepsy was accountable for the condition of the inmates. One epileptic woman was mother of 15 defective children. The value of outdoor treatment had been illustrated at the Craig Colony in New York, where, on days when patients were indoors and idle, the attacks were doubled in frequency. Statistics pointed to there being one epileptic among 600 of the population. In that ratio there would be 5500 in the Commonwealth, Victoria's share being 2000. In strongly urging the establishment of a farm colony, Miss Spence said it was evident they must look to private munificence for money for the land and buildings, and to the Government for a grant in aid of maintenance.

The New South Wales Drink Bill.

The amount spent on intoxicating liquors in New South Wales during the year 1903 was £4,473,114. Of this amount, £2.095.755 was spent on spirits, and the rest on beer and wines. The mean population was 1,422,800, so that the amount per head was £3 2s 10d. It is noteworthy that the amount spent on spirits is very much greater than on beer. In England the average expenditure is £4 7s a head, in Scotland £3 5s 2d, and in Ireland £3 4s 10d. It is rather remarkable that in Ireland more by 7s a head is spent on beer than on spirits, but in Scotland for every two guineas spent on spirits only 16s goes in beer. In England the expenditure on beer is £2 16s a head, as against an outgoing of £1 3s upon spirits. This consumption of spirits, of which the largest item is whisky, is a most serious question to be considered by all who have the true interests of this country at heart. Alcohol in any shape as a beverage should only be ordered by medical men after the most careful consideration. We all know of patients who make the excuse for their alcoholic drinking that Dr. So-and-so ordered it, and "told me that good whisky would never do me any harm." We are all familiar, too, with the horrible effects on social and family life which are to be attributed to excessive use of alcohol. One of the most severe comments on the drink traffic is contained in a letter addressed to the Licensed Victuallers and Beersellers' Protection Society of Croydon, London, by Mr. Justice Grantham. He says:—"I have lately been brought face to face for weeks with the conduct of publicans in the carrying on of their business, which has resulted in the most heartbreaking crimes that it is possible to imagine—husbands murdering their wives, wives their husbands, fathers their sons, friends their own best friends—all through the maddening influence of excessive drinking. Twelve murders, 18 attempts at murder, and woundings without number that were just as likely to have ended in murder as far as the conduct of the criminal was concerned, have been mine and my brother Judges' daily fare for the last four weeks on one circuit, and in almost every case as appeared in evidence, drink was the cause —drink served by publicans, and not at clubs, and drink proved to have been served in the public-house where the man was openly drunk."

University Education in Queensland.

The movement in favour of establishing a University in Queensland is gradually gaining ground, and at a recent meeting in favour of University extension, Dr. John Thompson, of Brisbane, in speaking of the necessary accommodation for scientific education, showed that much had already been provided by the State which could be utilised in connection with University courses. At Ipswich there were the shops where students in engineering could receive instruction; at Gatton there was the Agricultural College; for geology and mineralogy there was the museum at the corner of Queen and George streets; the good work done by Mr. De Vis in providing for natural history students; and there was the good work done by Mr. Bailey, the Government Botanist, available for those who took up botany. Queensland had been building up a University system, or the system had developed not as the outcome of a struggle to provide for high scientific education, but from the attempts from time to time to meet what appeared to be sheer necessities. These remarks show that although the establishment of a Queensland University has not yet been accomplished, yet the facilities exist for higher education practically equivalent to a University standard.

The Catchment Area of the Sydney Water Supply.

Dr. T. M. Kendall, medical adviser to the Sydney Water and Sewerage Board, has furnished a report on the sanitary condition of the catchment area. This area comprises 23,332 acres, and it carries a population of 1027 people and 6495 animals. Dr. Kendall lays stress upon the danger arising from the presence of human beings and their dwellings on any area of catchment, and the mere presence of any animals on this area as being a menace to the purity of the water derived from this catchment. Dr. Kendall states that, although much had been done in the way of achieving cleanliness on the watershed, to prevent all possibility of pollution, it was the imperative duty of the board to have full control over the watershed, to divert and stop up all public roads, clear away all human dwellings, and all animal life, and to prevent decaying vegetable matter being carried into the water supply during times of flood. Dealing with the question of mining on the area, he says:—"It is most unfortunate that so much valuable coal should be beneath the surface of the area, especially at the northern and north-eastern portions. Possibly with careful provision for adequate cover and substantial pillars for support, subsidence may not be feared, but it must be remembered that even with 1200 ft. of cover the surface has been known to subside. Provided no villages are created, and no coal is actually raised through the surface of the area, pollution will not occur. The waters delivered from mines are very polluting, and mines in England have been closed, by law, because of the pollution of neighbouring waters, through colliery wastes."

Friendly Societies and Boycotting.

In the report of the committee of management of the Grand United Order of Oddfellows, presented at the last annual session in Sydney, it was stated that recently a branch of another order notified their medical officer that he had either to give up the newly-formed lodge of the G.U.O.O.F. or they would find another doctor. The medical officer accordingly resigned from the new lodge. This treatment by a branch of another society was, the committee said, fortunately a rare occurrence, and they trusted that the protest lodged by the grand officers, and which was receiving attention, would have the effect of withdrawing the objection, for if the use of such methods became general it would simply be a deathblow to friendly society progress in this State.

Transactions of the Intercolonial Medical Congress, Hobart, 1902.

We have been requested to state that any member of Congress who has not yet received his copy of the Transactions should apply at once to the secretary, Dr. Gregory Sprott, Macquarie-street, Hobart. The delay in issuing the Transactions has been caused principally by pressure of work at the Tasmanian Government Printing Office, and also, to some extent, by authors not returning proofs as speedily as they might have done. As the committee gave authors the privilege of publishing their papers in the various medical journals, the volume of the Transactions becomes now merely a work of reference.

BRITISH MEDICAL ASSOCIATION NEWS.

PROCEEDINGS OF AUSTRALASIAN BRANCHES.

New South Wales.

The regular monthly meeting of the Branch was held at the Royal Society's Rooms on Friday, May 27th, 1904. Dr. MacCormick (President) in the chair. There were 41 members present.

The minutes of the previous meeting were read and confirmed.

The President announced the nomination of the following members:—Dr. Eames, H.M.S. "Torch"; Dr. A. C. Macarthur, Potts Point; Dr. A. G. Corbin, Sydney; Dr. L. W. Roberts, Cowra; Dr. J. S. Gutheridge, Braidwood; Dr. Rees F. Llewellyn, Braidwood.

Dr. **Charles MacLaurin** read a paper on "Peritonitis or Ileus?" (See page 272.)

Dr. **Hinder** said Dr. MacLaurin's clinical description of a patient suffering from acute peritonitis had been most graphic. He had been somewhat puzzled about the terms ileus and pseudo-ileus. To his mind a patient suffers from sepsis, or intestinal obstruction caused by kinks or adhesions, and if not, his bowels soon act and his vomiting ceases, so that he hardly knew why or when these other terms should be used. Some of the speakers might be able to enlighten them upon this point or give a reason for the necessity for such terms.

Dr. **Worrall** said the reason there was no cut and dried description of septic peritonitis was that the symptoms varied greatly; thus, while constipation and distension were the rule, yet patients sometimes died with the abdomen flat and the bowels loose. Ileus meant, he thought, a mechanical obstruction, while the obstruction accompanying septic peritonitis was due to a poisoning of the nerve centres and cessation of intestinal peristalsis. To distinguish between ileus and septic peritonitis was of great importance. He relied mainly upon the onset being later in ileus, and the pain being much more paroxysmal and severe, with visible intestinal movements. He happened to be in his ward in the Sydney Hospital one night, and was told a patient operated on eight or nine days previously for large pus tubes, and quite convalescent, had been seized with violent abdominal pains that afternoon and had been rapidly getting worse. Enemata had failed to move the bowels, and no flatus had been passed all day. The abdomen was greatly distended, intestinal coils could be seen moving freely, vomiting was frequent, and every few minutes the patient screamed in a way to alarm the whole ward. Remembering the condition at the time of operation, it was thought probable a coil of intestine or the sigmoid, which in this case was large and swinging, had contracted adhesion to the raw surfaces in Douglas' pouch and become kinked. The patient's body was raised so that she rested upon the back of her neck and head, and while in this position a large turpentine enema was given with the long tube, and at the same time the patient was gently shaken. In half-an-hour the bowels had moved and complete relief followed. This case occurred five or six years ago, and he had not seen one like it since. He thought the President would agree with him that 20 years ago, when they were in Liverpool, ileus was much more common than at present; improvements in technique of various kinds, especially with regard to the careful covering over of all raw surfaces, were responsible for its diminished frequency.

The **President** said he thought that the much less frequency of ileus now, compared with what prevailed some years ago, was due chiefly to the improved technique in covering up raw surfaces, and in the disuse of irritating antiseptics, and to the adoption of the Trendelenberg position, as it used to be common to see the intestine become red and congested during the operation, from carbolic lotion.

Dr. **MacLaurin**, in reply, said that he had thought the pathological distinction between peritonitis, ileus, and pseudo-ileus was so clear that it was hardly necessary to define the three terms. Pseudo-ileus was probably a nervous condition, due to handling or exposure of the intestines, and generally recovered promptly as soon as the bowels acted. Whether it was a premonitory symptom of peritonitis was a matter which would require a good deal of discussion. Ileus, on the other hand, was at any rate, to begin with, an entirely mechanical condition, due to some physical obstruction or strangulation of the gut, and could only be cured by relieving the cause. General peritonitis was a septic condition, being an inflammation of the peritoneum due to bacteria, and it was rather doubtful if true general peritonitis came within the category of curable affections.

Dr. **Hinder** read a paper on "Conservatism in Renal Surgery." (See page 275.)

Dr. **Maitland** said that in the main he agreed with Dr. Hinder. There were several points in the paper open to criticism. He discussed conservative renal surgery in (1) Cases of calculus; (2) symptomless hæmaturia; (3) tubercular kidney. In stone cases, of course, he agreed that it was wise to leave the kidney, if possible; no one could express a different opinion, but he also thought it good surgery to remove the kidney when that kidney was practically destroyed and the other kidney was ascertained to be healthy. If a nephrotomy only was done, the patient has a discharging sinus in the loin which becomes infected; a nephrectomy then had to be done, which should have been done in the first instance. No hard and fast rules could be laid down; the surgeon had to be guided by his experience, and the best results would be obtained if he made a judicious selection of the operation. Secondly, Dr. Hinder discussed conservative surgery in the treatment of symptomless hæmaturia. One thing stood out in relief in the history of the cases quoted by him, and that was their short history of hæmaturia. At the last meeting of this Branch he (the speaker) had read the notes of a case of essential hæmaturia, with a history of constant hæmorrhage for two years, and in the criticism which followed, Dr. Hinder was the only one who advocated nephrotomy as opposed to nephrectomy—the treatment he (Dr. Maitland) adopted, and based his remarks on the cases he had quoted that evening. He gave at that meeting unanswerable reasons why he was correct, which he would not again enter into. That nephrectomy was sometimes necessary, anyone familiar with the literature knew. Nitze (the inventor of the cystoscope) on four occasions did nephrectomy for this condition. Fenwick had done nephrectomy twice; once after a nephrotomy had failed and once after pelvotomy. Klemperer twice had done nephrectomy for the same conditions. All these cases recovered. He mentioned these few examples to show that it was not wise to take Dr. Hinder's conclusions absolutely, when surgeons, all with world-wide reputations, had considered it necessary to do a nephrectomy sometimes for this condition. The position he took up was the opinion he expressed in his paper, viz., nephrotomy in the *less severe* cases and nephrectomy in the *very severe* cases. They must remember they were operating for a hæmorrhage that was killing the patient, and they were all aware that nephrotomy was not a bloodless operation ; it was the very opposite—the hæmorrhage was severe, therefore the practically bloodless operation of nephrectomy should be done. He quite agreed with Dr. Hinder in his treatment of tubercular kidney ; the results were not satisfactory, but it was wiser to remove a tubercular kidney when once it was diagnosed. Garceau, whom Dr. Hinder quoted, favoured nephrectomy, with removal if necessary.

Dr. **Worrall** asked Dr. Hinder in what proportion of cases in his experience did calculi re-form.

Dr. R. **Steer Bowker** said he was pleased that Dr. Hinder had advocated more conservatism in the treatment of the kidney. He was struck the other day by noticing the extent to which a kidney can recover itself. About two years ago he had a patient suffering from a large pyo-nephrosis. She was in a very weak state from the long-continued suppuration. He had opened the abscess in the loin and removed a large stone ; the cavity was very large, and divided into an upper and lower pocket; the upper one extended so far up that he could not reach the end of it, and there seemed very little kidney substance left. A sinus remained, and kept on discharging until a few weeks ago. He should have removed the kidney, but the patient was an old woman, and he did not know where the upper cavity ended, so he did not like to make the attempt. However, on probing the wound a few days ago, he felt another stone, and determined to remove that. Before doing so he segregated her urine, and was surprised at the quantity and quality being secreted by that damaged kidney. He opened up the old wound and removed a large stone and some calcareous " plagues " embedded in the walls, which the pathologist says showed bone formation, and which fractured like bone, and he could now feel quite a lot of kidney substance, and the sinus has since closed. He thought Dr. Hinder was quite right in treating the cases he has described as he did. It would not have been right to have removed the kidney. He was quite right in saying that nephritis was often caused by injuries. He knew of two cases recently in his own practice caused by falls from horseback, and there was no doubt that where there is hæmorrhage there is generally nephritis, though the change in the kidney may be so slight that the pathologist fails to discover it. Concerning " painless hæmaturia," in cases one has to " individualise," and can't treat all by the same rule. It might be *necessary* to do at once a nephrectomy. With regard to partial nephrectomies, more particularly in tubercular cases, they all knew how difficult it was to eradicate all foci of that disease, and he was not sure that *true conservatism* did not in these cases lie in the complete removal of the whole organ.

Dr. **Hinder**, in reply to Dr. Worrall, said he should like to say that he never used any other suture but catgut or very fine wallaby tendon. Kangaroo tendon remains unabsorbed for months and even years at times. He had not had sufficient experience to give information of any value as to the ultimate good effected by decapsulation. His impression was that in selected cases it would be valuable. He had seen stones recur in two cases, but they were not his own, and it is more than probable that these were not recurrent cases but cases in which a small stone had been left. No doubt now that X-ray photographs have reached such a marked degree of excellence, such mistakes will occur with less frequency, because an operator will be able to see the number and position of the stones, and need not stop until they have been removed. He really had not come out that night expecting to convince his friend Dr. Maitland of the undoubted efficacy of nephrotomy in severe cases, nor was he (the speaker) likely to be influenced by the accounts of, at all events, some Continental operators, with whose value as authorities he was unacquainted. Italian operators may give a different story for all he knew, but this he did know, these patients of his all recovered, and did not lose their kidneys, and the next case of renal hæmaturia of the same type he should deal with in the same way ; nor did he think that it was likely that he should allow the patient to succumb for want of a further nephrectomy should such an occasion arise. It certainly had never arisen yet.

Dr. **Litchfield** read a paper on " The Recent Epidemic of Infantile Paralysis," for Dr. Wade, and also one on the same subject by himself.

Dr. **Mills** had seen many cases of poliomyelitis during the recent epidemic and also a good number of cases of simple basal meningitis about the same period. The fact that the two diseases occurred about the same period raised the question whether there was not some connection between the two, and whether the same cause was not operating in the two diseases. With regard to the cases in which there had been long continued tenderness of the affected muscles, he was inclined to the belief that with the affection of the anterior cornual cells there was associated a multiple peripheral neuritis. Such a case he had had under his care at Prince Alfred Hospital. In this case there was marked atrophy of practically all the muscles of the leg and thigh, with much and long continued tenderness in the muscles and along the nerve trunks.

Dr. J. **Macdonald Gill** said that it was just as well that this disease should be brought before the notice of the Branch at the present time, as it appeared to be spreading over the whole of the State. He took a particular interest in Dr. Wade's paper, as several of the cases on which the paper was based had been under his own care at the Children's Hospital. As far as he knew, only one case had proved fatal ; this was a male child, four years of age, admitted at 11 a.m. on October 3rd, 1903. He (Dr. Gill) happened to be at the hospital when the child was admitted ; the patient was paralysed in both legs with absent knee-jerks, and with a temperature of 102°. There was a history of 48 hours' illness, and of paralysis in the legs since the previous morning. The child died at 12.30 the next morning, about 13 hours after admission. Subsequently to his visit, the paralysis extended upwards till the muscles of respiration were involved ; the child dying cyanosed of respiratory failure The temperature rose to 103° at 6 p.m., but fell again to 102° before death. No post-mortem examination was allowed. The epidemic was of longer duration than Dr. Wade had stated by two months, the fatal case referred to above being the first admitted. It was strange that, although so many cases had come under treatment at the Children's Hospital (26 in all), he had not come across one at the Sydney Hospital ; one of his colleagues at the latter hospital had told him that his experience had been similar. He concluded by congratulating both authors on their papers, which had left little to be added from a clinical standpoint.

Dr. **Jamieson** said he thought the Association was much indebted to Drs. Wade and Litchfield for their communication. Epidemics of infantile poliomyelitis were by no means common, and were always well worthy of record. There could be no doubt that the outbreak was due to an infective agent and that the infective agent by some means showed a selective influence upon certain portions of the grey matter of the spinal cord. The absence of any post-mortem examination upon any of the cases was much to be regretted, as it would have made the record all the more valuable. A lumbar puncture might possibly have thrown some light upon the nature of the infective agent.

Dr. **Sinclair Gillies** considered the fact of no cases being seen at the Sydney Hospital was of interest, as in addition to those narrated at the Children's Hospital, he had had five or six cases in the out-patient department at Prince Alfred Hospital. In one of his cases facial paralysis was present combined with paralysis of the arm on the same side. Reaction of degeneration was present in the facial muscles, showing that the lesion was basal, not cortical. Batten about two years ago had advanced the view that acute anterior poliomyelitis, polioencephalitis superior producing infantile hemiplegia and diplopias, and polioencephalitis inferior producing isolated or combined paralysis of cranial nerves, were all varieties of the same disease, the difference being simply in the region affected. It was interesting to note that in the epidemic under discussion all the cases conformed to the type of anterior poliomyelitis; no case of polioencephalitis superior being recorded, and only two in which the basal nuclei were involved. He much regretted that a post-mortem could not be obtained in Dr. Gill's case, as though there was little doubt of the infective nature of the disease, exact pathological evidence was still wanted.

Dr. **Litchfield** replied. In answer to Dr. Worrall, he said that there were no deaths in the series. In answer to Dr. Millard, he said that the districts that the cases came from were not noted. In answer to Dr. Mills, he said that it was hard to believe that there was any direct relation between this disease and basal meningitis. In one case there was at the onset some cervical opisthotonos. This, however, may have been voluntary, owing to pain and tenderness in the muscles of the neck. Only one case of basal meningitis had been seen at the out-patients' department during the last six months. In answer to Dr. Gill, he said that nine-tenths of the cases occurred in December and January. In answer to Dr. Jamieson, he said lumbar puncture had not been performed; such a procedure might be tried for investigative purposes. In answer to Dr. Gillies, he said that in one of Dr. Wade's cases there was facial paralysis.

COUNCIL MEETINGS.

The Council met at the Association Rooms on 13th May, 1904. Present: Drs. Beeston, Rennie, Crago, Maitland, Newmarch, Abbott, Hinder, Pockley, and Dick.

Letter was read from a country member with reference to mileage rates. The hon. secretary's reply approved.

Letter was read from Dr. O'Dwyer, of Gundagai. The hon. secretary's reply approved.

Letter sent to Dr. Ellen Wood by the hon. secretary, with reference to her membership, was read.

Resolved—"That Dr. Ellen Wood be given the requisite notice, as laid down by the Articles of Association, that her case will be considered."

A country member wrote, asking for information as to insurance fees. To be informed in terms of the resolutions passed on the subject by the general meeting of members.

Letter was read from a member in Armidale, with reference to club practice in that town, and asking for co-operation of the Branch.

Resolved—"That the advertisement as inserted be approved.

Letter from a practitioner in Wagga Wagga, asking for information about the dispute with the lodges at Armidale.

Letter was read from Dr. Drummond, of Adelaide, with reference to the Medical Benevolent Fund.

Letter was referred to Committee of Benevolent Fund for report; Dr. Dick to represent the Branch.

Letter from Social Reform League, asking for representation by the Branch on the proposed conference. Received.

Letter was read from a country member, asking for particulars about juvenile lodges.

To be informed that the strongest protest should be made against such lodges.

The Council met at the Branch Room on June 10th. Present: Dr. MacCormick (President), in the chair; Drs. Abbott, Worrall, Rennie, Hood, Newmarch, Hinder, Maitland.

The following new members were elected:—Dr. Eames, H.M.S. "Torch"; Dr. A. C. Macarthur, Grafton; Dr. A. G. Corbin, Sydney; Dr. L. W. Roberts, Cowra; Dr. J. S. Gutheridge, Braidwood; Dr. Rees F. Llewellyn, Braidwood.

A letter was received from Dr. C. A. Mueller explaining that he had met one of the medical officers of the Balmain Dispensary in consultation in ignorance of the fact that he was on the confidential list.

Letter from the Western Suburbs Medical Association conveying a resolution passed by that association, as follows:—"Having been informed that certain persons between the ages of 16 and 20 years, members of juvenile lodges, are proposing to obtain medical attendance at half the ordinary rates, this Association affirms the recognised rule that all lodges pay their medical officers full adult rates."

A letter was received from the Employers' Association notifying that the Groom and Coachmen's Union had been formed.

A letter from the President of the Western Medical Association, forwarding the following resolutions:—(1) "That in the opinion of the Western Medical Association no patients from the country, excepting accidents and cases of great urgency, should be admitted to the metropolitan or suburban hospitals without a letter of recommendation from a medical man in the district in which they reside." (2) "That the terms of the above resolution be notified to the New South Wales Branch of the B.M.A., with a request that the same may receive its consideration." Resolved—"That the Western Medical Association be informed that the Council considers that the Association has no power to interfere in the matter; but, if it is desired to have the question discussed at a general meeting, arrangements will be made accordingly."

Letter from a country member asking the opinion of the Council as to the fee to be charged for a major obstetric operation. Resolved—"That a fee of £10 10s. is a fair one."

South Australia.

THE monthly meeting was held on the evening of May 26th, 1904, at the University. The President (Dr. Jay) presided over an attendance of 28 members and three visitors.

Cases were shown as follows:—By Drs. **SWIFT**, **GUNSON**, and **BONNIN**, in all eight children recovering from an epidemc nervous disease resembling acute infantile paralysis. Other members mentioned having had similar cases recently.

Dr. **LENDON** showed a young girl with microcephalus, microphthalmos and cleft palate. He had operated upon her some years ago by linear craniectomy.

Dr. J. C. **VERCO** showed microscopic specimens of what has been called "false intestinal sand." It was brought to him by a lady, aged 58, who suffered from very frequent attacks of pain in the right hypochondrium. These had come on for nine months, and from their history appeared to be biliary colic. She produced three round gallstones and about a third of a teaspoonful of sand, collected from her motions, under the impression of its being "biliary gravel." It was of a greyish colour with a tint of yellow, in roundish grains, which, under the microscope, seemed covered with minute projecting crystals. Treated with strong nitric acid the grains turned orange brown, and there was a good deal of effervescence, and after very prolonged boiling they entirely disappeared. They were boiled in liq. potassæ, but did not alter their appearance, except to become dark brown. Incinerated on platinum they smoked, but did not appear much altered under the microscope, except that they were rather less in size and more white and chalky. Boiled in acetic acid forh. they did not seem much altered; but when now incinerated on platinum they burned completely away, and when others so treated with acid were examined under the microscope, though retaining their former shape and projections, these were seen to be composed of organic structure, with a central long cell cavity, from which, on either side, small canals extended nearly up to the surface. They were, in fact, the sclerenchymatous substance which forms the hard granules in the pear. They had been coated with inorganic salts, the carbonate and phosphate. These had dissolved in the acids, leaving the woody fibre behind. Eventually strong nitric acid destroyed this. Liq. potassæ could not reach it to dissolve it, owing to its coating. When incinerated, the mineral salts remained as a calcareous mass to represent the granules; but when these salts had been dissolved off by acetic acid, and then the grains were burned, they were completely consumed. They were passed by the patient when pears were in the market. He was completely puzzled by this material as to what it could be, until he found a paper on "Intestinal Sand," by Sir Dyce Duckworth and A. E. Garrod, in the *Medico-Chirurgical Transactions* for 1901, p. 389, where, under the heading of "False Sand," a description is given of *pear* sand, which exactly corresponded with his observations. To make the matter certain, a medical man kindly took some pears at a meal, and then collected from the fæces the sandy sediment of their washings, and provided abundance of "intestinal sand," consisting of the sclerenchymatous tissue of the pear in the grains, with projecting cells, but destitute of the calcareous coating.

Dr. **LENDON** showed (1) A finger amputated for gangrene in a young woman who was exciting sympathy by causing an artificial dermatitis by means of carbolic acid; (2) a forearm from a neo-natus, with double deformity of the hands; (3) a specimen of ectopic gestation; (4) a breast removed subcutaneously from a young man for chronic mastitis; (5) a prostate gland removed by the suprapubic route.

The minutes of last monthly meeting and of the special meeting were taken as read, and signed.

The correspondence having been dealt with,

Drs. J. C. **VERCO** and **POULTON** read the history of a case of cerebral hydatid. (See page 265.) They were congratulated on this successful case.

Dr. **VERCO** said, in replying, that in his first case of cerebral hydatid diagnosed and operated on, the child before operation had cerebral meningitis, and there was adhesion of the brain to the dura mater, and the patient died from persistence and extension of the meningitis. In his second case there was no meningitis and no adhesion; but the child died in some 14 hours from very high temperature and convulsions, with much drainage of cerebro-spinal fluid, which soaked its bedding as far down as its hips. There was found post-mortem a communication between the cyst cavity and the ventricles. One reason for performing the operation in two stages is to get adhesion of the brain surface to the dura mater and so shut off the subarachnoid space from the wound, and prevent loss of cerebro-spinal fluid. If the cyst cavity does not communicate with the ventricles, this advantage would be gained, but should such a communicaton exist, the two-stage operation would give no advantage.

Dr. W. A. **VERCO**, Dr. **POULTON**, and Dr. **REISSMANN** then each read notes on cases of abdominal gunshot injuries (to appear in a future issue), to which Dr. **HORNABROOK** added some remarks.

Victoria.

THE ordinary monthly meeting of the Branch was held at the rooms on the evening of the 18th May. Dr. H. W. Bryant (vice-president) in the chair.

Dr. **HENRY** exhibited and explained the use of the Materna glass for the home modification of milk. He said the modification of cows' milk was attempted with the object of changing its proportions till it approaches in character the nature of human milk. This glass was manufactured to simplify the problem of artificial infant feeding and to encourage the adoption of cows' milk in a modified form. It consisted of a glass jar showing seven panels and holding 16 oz. One division is graduated simply in ounces, the other six present different formulas of modified milk. Formula 1.—Water 12½ oz., cream 1¼ ez., limewater 1 oz., milk 1¼ oz., milk sugar 1 oz. Formula 2.—Water is slightly decreased and the other substances slightly increased, and the formulas to No. 6, when milk is 9¾ oz., cream 1 oz., barley gruel 5¼ oz., and granulated sugar ¼ oz. The *sugar* used was preferably milk sugar; when that could not be obtained granulated sugar should be used—about half the quantity up to the cross. *Water boiled*, and hot and stirred until sugar was dissolved, and should if necessary be filtered through muslin or absorbent cotton. *Cream*, ordinary, 16 to 20 per cent., as obtained in bottle milk, otherwise ordinary light cream. The whole quantity for 24 hours should be compounded, poured into separate bottles and pasteurised and stoppered with cotton, and placed upon ice. Quantity—Formula, 10 to 25 oz.; formula 6, 37 to 48 oz. To obtain a pure milk supply for the householder was a grave and pressing problem, and public opinion was now slowly and surely awakening to the importance of a vigorous supervision of the supply of milk. Practically it resolved itself into the question of minute attention to detail. The Board of Public Health of Victoria had recently issued a rough draft of the Milk Supervision Bill. As far as he was able to judge, the bill dealt almost exclusively with the supply of milk. Efficient measures were indicated to assure a sanitary guarantee of the purity of the milk. The purity in transit and delivery of milk were, however, not so stringently provided for. Some legislation, he thought, should be introduced dealing with the delivery of milk. His attention was frequently drawn to a method of handling milk common in all the municipalities. A milk cart was driven up to the house and the driver took down his milk can, which he opened on the road or street as the case might be, and measured the milk into some domestic utensil. During that procedure the opportunity was given to dust, débris and refuse of the roads to get into the milk. He thought the municipalities should co-operate with the Board of Health to protect the consumer by insisting on the discontinuance of this method of delivering milk, and he would suggest that this Branch might very well draw the serious attention of the Board of Health to the dangers of some of the present milk deliveries. He gave notice of the following motion :—" That this Branch urges upon the Public Board of Health the desirability of introducing legislation with a view of enforcing a discontinuance of the present reprehensible system of delivering milk to the consumer from open cans."

Dr. Fox thought that the Materna glass was a very useful and simple method of mixing milk in proper proportions for the use of infants. Once the mothers understood its application they could hardly make a mistake. Concerning the contamination of milk he considered that an improved method might be adopted, and he agreed with Dr. Henry's remarks on the subject.

Drs. Cuscaden and Bryant also spoke on the subject.

Dr. Fox exhibited and read notes on Altyman's Saccharometer, and gave a most interesting demonstration of this very useful instrument.

A hearty vote of thanks to Dr. Fox was carried unanimously for the trouble he had taken and the zeal that he had shown on this occasion and also on other occasions in bringing instruments and apparatus for his demonstrations before the Branch.

Queensland.

A meeting of the Branch was held on Friday, June 3rd, Dr. W. S. Byrne (President) in the chair, and an attendance of 14 members.

Dr. Hopkins exhibited a patient who had received a bullet wound involving the brachial plexus, in whom some improvement had followed suture of the divided nerves.

Dr. Wilton Love described a case of " Intestinal Sand," which had come under his notice.

Dr. O'Brien (curator) exhibited (1) Lizard with two tails ; (2) Ruptured appendix ; (3) Knot in umbilical cord ; (4) " Bronchial tree," from a case of diphtheria ; (5) Ankylostoma worms ; (6) Ganglia from wrist.

Dr. J. Cameron read a paper on " Notes on Midwifery."

Medico-Ethical and Medico-Legal.

An Action for Damages.—At the recent sittings of the District Court at Lismore, N.S.W., the case Dr. Innes Mackay *versus* Rivett, a claim for two guineas for professional services, and the cross action, Rivett *versus* Innes Mackay, an action for damages for alleged neglect in attending the plaintiff's wife, was heard. Most of the medical practitioners in town gave evidence. The plaintiff Rivett alleged that the defendant injected morphia when the patient was in a most critical condition. His Honor, after a lengthy judgment, gave a verdict for the professional claim, but non-suited the claim against the doctor for damages.

A Charge of Murder against a Medical Practitioner.—According to a report in the *Sydney Morning Herald*, an inquest touching the death of Euphemia Franklin, aged 28 years, which took place on May 20th, was conducted before the Liverpool (N.S.W.) District Coroner (Mr. W. H. Mackenzie, J.P.). The jury returned the following verdict :—" We find that Euphemia Franklin died at Passefield-street, Liverpool, on May 20th, 1904, from the effects of an operation performed upon her by Frederick William Marshall, which resulted in abortion, and caused her death. And we further find the said Frederick William Marshall guilty of murder, and Thomas Ireland of being an accessory before the fact." The Coroner committed both men for trial at the ensuing sessions at Darlinghurst.

A " Professor of Herbs."—According to a report in the *Mudgee Guardian* on June 2nd, an inquest was held on the body of a man named James Hickey, who died in the Mudgee Hospital on May 31st. It appears that the man was being treated by a " Professor of Herbs," named Bull, for rheumatism and partial paralysis of the spine, the treatment consisting in rubbing in turpentine and mercury. One liniment which had been used on deceased was made up for the treatment of a horse ! Dr. Hawthorne was called in, and finding the patient suffering from acute nephritis, ordered his removal to the hospital, where he died two or three days later. Dr. Willis, the medical officer at the hospital, made a post-mortem examination, and found acute nephritis and congestion at the bases of both lungs. The organs showed no signs of mercurial poisoning. The " Professor," under examination, showed gross ignorance of the merest rudiment of knowledge of herbs. He admitted having hired a man and his horses, and that he used to ride up and down the town while his groom used to go and see the patients. The jury resurned the following verdict :—" That deceased died from inflammation of the kidneys, and that the symptoms of this disease must have been present when he was seen by William Bull at about 6.30 p.m. on the evening of Wednesday, May 25th, 1904, and that the treatment then prescribed by Bull was improper, but there was no evidence to show it accelerated death."

Hudson's " Eumenthol " Jujubes (Registered) are a Gum Jujube containing the active constituents of well-known Antiseptics, Eucalyptol, Thymus Vulg., Pinus Sylvestris, Mentha Arv., with Benzo-Borate of Sodium, etc., and exhibit the antiseptic properties in a fragrant and efficient form. Sold by all chemists ; tins, 1s 6d. Are Antiseptic, Prophylactic, reduce Sensibility of Mucous Membrane. Mr. W. A. Dixon, F.I.C., F.C.S., Public Analyst of Sydney, after making exhaustive tests, says :—" There is no doubt but that 'Eumenthol' Jujubes have a wonderful effect in the destruction of bacteria and preventing their growth. . . . I have made a comparative test of 'Eumenthol' Essence and Creosote, and find that there is little difference in their bactericidal action."—[Advt.]

REVIEW OF CURRENT MEDICAL LITERATURE.

SURGERY.

Some Observations on Carcinoma of the Colon.

H. S. Clogg (*The Practitioner*, April, 1904) contributes an article on the above, which is based upon an analysis of 25 consecutive cases of carcinoma occurring in different parts of the colon. Most of the cases were in the wards of the Charing Cross Hospital. The situation of the growths were as follows:—Cæcal region, eight cases; hepatic region, three cases; splenic region, six cases; recto-sigmoid region, eight cases. The characters of the growths were widely different, and two distinct types may be recognised. The first involves some 3 to 4 inches of bowel; it is soft, friable, extensively ulcerated, and does not narrow the lumen of the gut materially. The second type involves, as a rule, a smaller tract of gut, the lumen of which is always more or less materially diminished by it. The former type is the one most frequently seen in the cæcal region and not infrequently in the hepatic; the latter type is the one to expect in the recto-sigmoid and splenic regions, and less frequently in the hepatic region. Carcinoma of the colon is essentially a chronic malady, but when the patient first comes under the supervision of the surgeon, acute or sub-acute symptoms are frequently present. In this series, in no less than 16 cases was this so; in 10 cases complete obstruction was present, and in six suppuration had occurred. On careful enquiry it was ascertained that symptoms had been in existence for two or three months. These symptoms were, in every case, pain sluggish action of the bowels, deterioration of health, and some loss of flesh, sufficient to be actually appreciated by the patient. The pain took the form of occasional attacks of colic. The second symptom—constipation—frequently necessitated a very careful inquiry. Patients cannot be brought to believe that a little constipation is of any importance. The author emphasises the importance of thoroughly investigating all cases presenting the before-mentioned symptoms under an anæsthetic, and in many cases an exploratory laparotomy should be performed. From an investigation of the statistics of these cases it appears to be the rule for the lymphatic glands to be involved when the symptoms are severe enough to bring the patients for treatment. The author thinks that recurrence is more likely to occur through infected glands having been left than through a local spreading in the sub-mucous tissue or other coats of the bowels. The removal of the nearest chain of glands is of the utmost importance. In the cæcal region, the glands involved were the so-called ileo-colic group, which form quite a chain running some distance along the ascending colon. In the region of the hepatic flexure the glands involved were a chain running along the lower border of the transverse colon. In the region of the splenic flexure the glands involved were a chain running along the lower border of the transverse colon nearly to its centre. In the region of the sigmoid colon and upper rectum, the glands are spread out in the mesentery and from them the lymph flow converges to a series of glands situated near the root of the mesentery. An attempt to remove these various groups of glands involves, of necessity, the sacrifice of more bowel than it is usually the custom to remove. (1) In cæcal growths some inches of ileum with its mesentery should be removed. The greater part of the ascending colon should also be removed, practically to the hepatic flexure. (2) In growths in the region of the hepatic flexure, the corresponding half of the transverse colon should be removed, with as much of the mesentery as possible. (3) In the splenic region, including the growths just below and really in the upper part of the descending colon, the removal of the corresponding halves of the transverse colon and meso-colon should be practised. (4) In the recto-sigmoid growths, practically the whole of the meso-sigmoid should be removed, and this means a sacrifice of nearly the whole loop of bowel. This would entail, in the majority of cases, the formation of an artificial anus. The author devotes some attention to cases of suppuration, as no less than eight out of 25 were complicated by suppuration. In four of these the growth was in the cæcal region. As to treatment, it goes without saying that the growths should be removed, if possible, with their lymphatic " drain." Whether a growth can be removable or not can only be told after the abdomen has been opened. If the liver be infected, no radical operation is possible, and the primary growth must be left alone. If, after opening the abdomen, the growth be found irremovable, then, in all cases, a short-circuiting operation should be performed where possible. The reason for advocating this is because of the frequency of suppuration in these cases. If suppuration occurs, fæces are certain to come from the wound; and sooner or later practically all the fæces will pass by this channel. Considering the cases in which complete obstruction, with distended gut and intestinal paralysis is present, colotomy is the only available treatment.

A Simple Method of Performing Gastro-enterostomy and other Abdominal Anastomoses.

Moynihan (*The Practitioner*, February, 1904) describes the above, with illustrations. The abdomen is opened about three-quarters of an inch to the right of the middle line, and the fibres of the rectus are split. After the peritoneum is opened, the great omentum and transverse colon are lifted out of the abdomen and turned upwards over the epigastrium. The under surface of the transverse meso-colon is exposed, and the vascular arch, formed mainly by the middle colic artery, is seen. A bloodless spot is chosen, a small incision made in the meso-colon, and the finger passed into the lesser sac. The opening in the meso-colon is then gradually enlarged by stretching and tearing, until the fingers can be passed through it. It is very rarely necessary to ligature any vessel. The hand of an assistant now makes the posterior surface of the stomach present at this opening, and the surgeon grasps the stomach and pulls it well through. A fold of the stomach, about three inches in length, is now seized with a clamp whose blades are sheathed in rubber tubing. It is important that the point on the greater curvature held by the clamp should be the lowest point. This is made certain before the stomach is turned over to reach its posterior surface, by observing that point which lies lowest in the abdomen. When the posterior surface is exposed, special care is taken that this lowest point is fixed in the end of the clamp. The jejunum is then brought to the surface, and a portion of it, about seven or eight inches from the duodeno-jejunal angle, is fixed in a second pair of clamps. The two clamps now lie side by side on the abdominal wall, and the portions of the stomach and jejunum to be anastomosed are well outside the abdomen, embraced by the clamps. The stomach, with the exception of the part embraced by the clamp, is returned to the abdomen, through the upper part of the incision. The whole operation area is now covered with gauze wrung out of hot sterile salt-solution. A continuous suture is then introduced, uniting the serous and subserous coats of the stomach and jejunum. The stitch is commenced at the left end of the portions of gut enclosed in the clamp, and ends at the right. The length of the sutured line should be at least two inches. In front of this line an incision is now made into the stomach and jejunum, the serous and muscular layers of each being carefully divided until the mucous membrane is reached. As the cut is made, the serous coat retracts, and the mucous layer pouts into the incision. The cut edge of the serous coat is loosened all round from the underlying mucosa. An ellipse of the mucous membrane is now excised from both stomach and jejunum, the portion removed being about one and three-quarters or two inches in length, and rather more than half an inch in breadth at the centre. The gastric mucosa shows a marked tendency to retract; it is therefore seized with a pair of miniature vulsella on each side. The inner suture is now introduced. It embraces all the coats of the stomach and jejunum, and the individual stitches are placed close together and drawn fairly tight, so as to constrict all vessels in the cut edge. The suture begins at the same point as the outer one, and is continued without interruption all round the incision to the starting point, where the ends are tied and cut short. The clamps are now removed from both the stomach and the jejunum, in order to see if there is any bleeding. The outer stitch is now resumed, and continued round to its starting point, being taken through the serous coat about one-sixth of an inch in front of the inner suture. This outer stitch is also continuous throughout; when completed the ends are tied and cut short as with the inner stitch. There are thus two suture-lines surrounding the anastomotic opening; an inner, hæmostatic, which includes all the layers of the gut, and an outer, approximating, which takes up only the serous and subserous coats. For both stitches the author uses thin Pagenstecher thread and a special pattern curved needle. Other intestinal anastomoses are carried out in exactly the same way, and an end to end anastomosis can also be readily performed in this manner.

Complications and Sequelæ of Prostatectomy.

J. E. Moore (*Annals of Surgery*, March, 1904) discusses the above in an interesting article. He states that at the present time no single operator has had sufficient experience to enable him to speak authoritatively upon this subject, and such extremes of experience have been reported that it is difficult to estimate the real dangers and difficulties of prostatectomy. One surgeon says: "We can confidently say to sufferers from the troubles incident to hypertrophied prostate that a cure is absolutely certain, the danger practically nil." Another says: "No thoughtful surgeon will declare that the mortality rate of prostatectomy is trivial." Prostatectomy, involving as it does such important anatomical structures, and being performed, as it often must be, under such adverse conditions, is a capital operation, and no capital operation is without a death rate, serious complications, and sequels. With our improved technique, the mortally is not high, the complications and sequelæ are constantly growing fewer, but they must necessarily exist, and it is only by faithfully noting and reporting them that we can hope to reduce them to the minimum. The operation is applicable only to properly selected cases; there will always be a place for palliative measures in neglected cases of prostatic enlargement. The number of years a man has lived is not a proper index to his surgical age. As long as a man's heart, arteries and kidneys are in a fit condition to allow the administration of an anæsthetic, he is a fit subject for surgery. The most frequent cause of death following this operation is uræmia, consequently the most important preliminary examinations are those of the kidneys. In the presence of serious kidney disease, the operation is contraindicated. The next greatest danger is sepsis, and in the presence of an infected bladder it is an ever present one. Old men have much less resisting power against sepsis than younger ones. It is impossible to disinfect a thickened, badly-infected bladder before operation, so our only hope lies in thouroughly cleansing the wound, and providing for free drainage. The complicating cystitis is often at the present time the most positive indication for operation; and it is for the relief of this complication that the various palliative measures are most frequently employed. Our only means of preventig cystitis as a complication is to get prostatectomy so well established that it will be the accepted method of treatment when catheter life would otherwise begin. The only satisfactory treatment for this complication is drainage, and this is best brought about by perineal prostatectomy. Stone is a frequent complication of enlarged prostate, and should always be sought for and removed during the operation. The incision for a prostatectomy when too extensive causes various complications. In the upper operation it may injure the peritoneum, and in the lower one important muscles, blood vessels, and nerves are unnecessarily injured by an extensive cut. Beginners are prone to cut too much, because they think it makes the operation easier, and because they have not been properly warned against the complications arising therefrom. Hæmorrhage is an occasional complication, but its dangers have doubtless been over-estimated. The median perineal incision certainly reduces this danger to a minimum. Too little effort is made to save the urethra in the perineal operation. It is not reasonable to expect that there will not be traumatic stricture later. Within the next few years we will all see patients suffering from this cause who are now listed as cured. This operation is a mutilating one at best, and it is our duty to be as conservative as possible. The destruction of a certain part of the lower wall of the urethra is unavoidable, but the upper and side walls can and should be preserved. A man with a traumatic stricture at the neck of his bladder may be in a worse condition than one with an enlarged prostate. One of the serious objections to the suprapubic operation is the extensive injury done to the bladder. With proper care, extensive injury to this organ can be avoided in the perineal operation. The most difficult problem in the perineal operation is to avoid injury to the rectum, which is always a serious complication. Young, of Baltimore, has reported to the American Association of Genito-Urinary Surgeons a technique by which he claims to be able to preserve the seminal ducts, and this is certainly a necessary step if we hope to establish the early operation for prostatic enlargement. An occasional sequel of prostatectomy is incontinence or dribbling. This is due either to injury to muscles or nerves or to the neck of the bladder, most frequently the latter. The perineal wound is usually closed inside of three weeks, but a perineal fistula will occasionally remain. It is rarely necessary to leave a tube in the bladder for more than a week. The lateral walls should be carefully approximated by buried catgut sutures, so that there remains but a channel for the drainage tube to pass from the bladder to the outside. Later, when we learn to operate upon prostates before the bladders are infected, we may be able to close the perineal wound completely, draining through the urethra only. It is a mistake to fill a large space in the perineum with gauze. A communication between the urethra and the rectum is one of the sequels met with occasionally. Epididymitis is quite a common sequel, and may be caused by the injudicious use of sounds. The writer concludes with the following paragraph:—"Some failures are bound to follow this important operation, as they do every operation of like magnitude; but, notwithstanding this fact, it is destined to be one of the greatest boons modern surgery has to offer suffering mankind."

EAR, NOSE AND THROAT.

Malignant Disease of the Larynx.

Bach (*Lancet*, April 2, 1904) states that the successful removal of a malignant neoplasm necessitates the removal of so much surrounding tissue and the condition is so serious that if any operation is to be done it must be an external one. In his experience, when the growth has affected the parts outside the larynx, any curative operation is out of the question, but when the disease appears to be intrinsic, he advises an exploratory thyrotomy, and should it then be found that the whole of the disease can be safely removed, one may proceed as far as removing half of the larynx with satisfactory results; but should it be found that the disease is so extensive that complete laryngectomy would be necessary, he thinks it better to proceed no further, but to close up the wound, as the results of the complete operation are in his experience always unsatisfactory, and he believes that the patient as a rule will live longer and in greater comfort after a palliative tracheotomy. The importance of early diagnosis for treatment cannot be over-estimated. In all cases of even slight hoarseness lasting over a month, a careful examination by a skilled laryngologist is imperative.

Paraffin Injections in Atrophic Rhinitis.

Moure and Brindel (*Revue heb. de Lar.* No. 40) report their results in a large number of cases. A special syringe and curved needle were used to inject Eckstein's paraffin fusible at 60° C. The nasal fossa to be operated on is carefully cleaned of crusts, and then cocainised throughout the extent of the inferior turbinal, the floor and the septum. This should be done rapidly to avoid too rapid retraction of mucous membrane. The needle is plunged beneath the mucous membrane and the injection made slowly, while the patient remains absolutely still. During the injection, pressure is made upon the nasal bones at the inner angle of the eye to prevent the passage of paraffin beneath the integument, or into the facial vein. At times both sides are operated upon at one sitting. It is unwise to inject too much paraffin at a time, so that it is better to reconstruct first the posterior portion of the inferior turbinal, and three or four weeks later the anterior. The inferior turbinal is the point of election for these injections; but at times when the middle turbinal is totally atrophied, while the lower is large, an artificial obstruction at this level may be created by injecting a few cubic centimetres beneath the mucous membrane of the septum. Likewise it is sometimes desirable to reduce the calibre of the inferior meatus by injections beneath the floor of the nose. Rest for 24 to 48 hours, and a moist hot compress if necessary, constitute after treatment. Certain complications may occur after the injections. Neuralgic pains, especially in the roots of the teeth, may occur, but are transitory. Phlebitis of the facial vein may arise with pain from four to eight days. This is treated by hot moist dressings. At times particles of paraffin migrate beneath the skin, especially at the inner angle of the eye. If necessary these may be removed through a small incision by means of a curette. As to indications and contra-indications, it makes no difference what the amount of crusts or fœtidity, nor the duration of the affection, so long as we are able to restore the nose to its normal calibre. This is impossible when the mucous membrane has lost its elasticity and become adherent. Of 133 cases kept under observation 76 were cured, 62 p.c.; 33 were improved, 26 p.c.; 14 were unimproved, 11 p.c. By improvement is meant not only suppression of the odour and crusts, but of the secretions of viscous matter subsequently. The great majority of the cases use no douche treatment, and can easily blow the mucus from their nose.

Intra-laryngeal Growths Treated by the Galvano-Cautery.

Dundas Grant (*Lancet*, April 9th, 1904) states that the final removal of the stump of an intra-laryngeal growth is often as difficult as that of the main mass of it is easy. The extirpation of the residual stump from which a growth is apt to take place often baffles instrumental interference when the growth is on the edge of the vocal cord, but so near the anterior commissure that there is no room in front of it for the anterior blade of clean-cutting forceps. In such cases Grant recommends the galvano-cautery to effect the final clearance.

The cautery should be introduced "cold" and modified in shape and length until it can be made to touch the exact spot with as little difficulty as possible. The point should be carefully filed down till the incandescence and extinction are practically instantaneous. In a small stump the lightest touch is all that is desirable, and ought to be much less than at the time appears sufficient. In addition to the destruction of a portion by the actual burning away of substance, the subjacent part of the growth undergoes a certain amount of shrinkage. In several instances other parts of the larnyx were unintentionally touched by the cautery, but this gave rise to no ill effects except a slight temporary increase of hoarseness.

THERAPEUTICS.

A Non-Toxic Preparation of Iodine.

Wingrave (*Lancet*, April 9th, 1904) states that after several experiments with preparations of iodine with the object of finding one which could be given internally in large doses for considerable periods without causing symptoms of iodism while exercising its specific effects on lymphatic enlargements, he has succeeded in arriving at the following formula:—Iodine, 2½ grammes; tannic acid, 4 grammes; alcohol (90 per cent.), 38 cubic centimetres; syrup, q.s. to 75 cubic centimetres. The iodine is dissolved in the alcohol, the tannic acid and 30 c.c. of the syrup are added, the solution is heated to just below boiling point until it affords no evidence of free iodine with the starch reaction (about 20 minutes), is then cooled, and the remainder of the syrup is added with flavourings. Each drachm contains two grains of iodine. It may be given in doses of from half a drachm to two drachms in water or wine before meals, according to age. The iodine is in loose chemical combination with the tannic acid, since none can be demonstrated free, yet it is sufficiently free to be given up readily to the tissues after absorption, and consequently there is no chance of any local intestinal or gastric irritation, so often associated with the administration of free iodine. The author has found that children tolerate it well, and it has proved specially useful in cases of chronic lymphadenitis, associated with, or independent of, enlarged tonsils and adenoids, especially when the enlarged glands persist after tonsillotomy. It is further indicated in those children who possess but slightly enlarged faucial and pharyngeal tonsils, in whom operation is contra-indicated or objected to. In atrophic rhinitis it has afforded gratifying results, especially when combined with arsenic, also in simple bronchocele, supplemented with the use of iodine oleate (1 in 9 of oleic acid) as a pigment.

The Treatment of Cardiac Toxæmia in Pneumonia.

Elshner (*New York Medical Journal*, Jan. 2nd, 1904). in discussing the treatment of the serious effect upon the heart of the toxins of the pneumococcus, condemns the use of such cardiac depressants as veratrum viride and nitroglycerin as being injurious except in cases where there is arterio-sclerosis. The three remedies which he advocates are strychnine, digitalis, and adrenalin. The latter acts on the heart and blood-vessels, and not on the vaso-motor centre, and may be used to assist the action of strychnine. When the vaso-motor centre is exhausted and blood pressure does not react to strychnine, adrenalin may be still used, and if combined with general stimulation may tide the patient over the critical period of his illness. Adrenalin appears to act favourably in all infections where there is danger of myocardial degeneration. The repeated administration at short intervals of 15 minims of a 1 in 1000 solution of this drug will act favourably in raising the blood pressure in some cases of pneumonia in which strychnine seems to have no effect in this direction.

The Treatment of Enuresis in Children.

Percy Lewis (*British Journal of Children's Diseases*, February, 1904) remarks that the variety of causes to which this condition has been attributed, and the very diverse treatments which have been recommended for its cure, suggest that its pathology has not been accurately studied. The treatment which the writer has adopted with success for some years was suggested by the consideration of a similar condition which occurs in children fed on starchy foods. Such children always pass a larger amount of urine than normal. Their nurses complain that they are always soaking their diapers. When their starchy food is cut off this symptom disappears. It is the same with the victims of enuresis. In most cases a rigid anti-diabetic diet removes the symptoms in a few days. The *cause*, however, due to a general depression of health produced by an excessive starchy diet, requires general tonic treatment at the same time. During the cure starchy foods may usually be allowed for breakfast without "accidents" occurring at night. Without any other treatment hospital cases are relieved often at once, and finally cured, by being taken as in-patients and fed on the ordinary hospital diet. In private cases even small quantities of bread or cake given at dinner or tea early in the treatment cause the bed-wettings to recur. In about three or four weeks, sometimes sooner if the tonic treatment is pushed as well, a normal diet may be given without enuresis happening.

Iodine in the Treatment of Thrush.

Illoway (*Medical News*, lxxxix. No. 9) states that none of the agents usually employed and recommended in severe cases of thrush has that certainty of effect and that rapidity of action needed, where every moment lost is a grave detriment to the starving child. He found that iodine applied locally proved to be a most efficacious remedy. He reports two cases in which he used it. In one, an infant, 2 weeks old, he found the whole tongue back to the root covered with the parasite, and small patches on the gums and on either cheek. He applied the following:—Tincture of iodine, ½ a dram and glycerine, 3½ drams, and applied it with a camel's hairbrush to the affected spots. The effect was remarkable, and when he had completed the application not a vestige of the patches were seen. The mother was directed immediately to sponge herself, particularly her breasts very thoroughly with soap and water, rubbing dry with a clean towel, and to do this every morning. After an hour or so the child was put to the breast; the next day there was no trace of thrush, and the infant took the breast well afterwards. The second case was a similar one. The glycerine in the mixture loosens the mycelium from the tissues to which it is attached, and makes its removal an easy matter.

The Use of Antistreptococcic Serum in Scarlet Fever and Diphtheria.

Mackie (*Lancet*, February 20th, 1904) has arrived at the following conclusions on the use of the antistreptococcic serum in the treatment of scarlet fever and diphtheria:—1. Antistreptococcic serum is of distinct value in a certain number of cases of scarlet fever, particularly in those where the throat lesion is severe and toxæmia is marked. 2. Bacteriological examination will give no sure guide as to the cases in which serum will be beneficial, therefore it is advisable to give the serum early, and to make the bacteriological examination afterwards. 3. The serum ought to be given early in the disease just as in diphtheria. The longer the disease has lasted before the serum is used the less likelihood is there that it will be beneficial. Antistreptococcic serum is too often brought in with strychnine and oxygen when it is unreasonable to expect it to do good. 4. If the first dose or two have no effect on the temperature, its continuation will probably not be of any value. 5. The serum is liable to produce urticario-erythematous rashes. 6. Even in those cases in which it does no good there is no evidence to show that it does harm.

Dietetic Treatment of Epileptics.

Balint, in *Neurologisches Centralblatt*, for April, 1903 records the results of treatment of epileptics on a diet of milk, butter, eggs, fruit and bread, in which bromides were substituted for salt. In a series of cases treated for from five months to one and a half years the number and intensity of the convulsions were reduced 78 per cent., but it was difficult to keep up the treatment, as the patient's appetites diminished on account of the sameness of the diet. Brominism resulted in some cases. The treatment is recommended for further trial.

CORRESPONDENCE.

London.

(FROM OUR OWN CORRESPONDENT.)

The Holman Testimonial—Death of Sir Henry Thompson—Hospital Saturday Fund—The Sleeping Sickness—King Edward's Hospital Fund—Army Dentists.

THE inauguration of a fund to commemorate the work, both public and private, which for the last 50 years has been ungrudgingly carried on by Dr. Constantine Holman in connection with many of the most important and best known charities of the medical profession, offers an opportunity seldom afforded for the recognition of life-long and devoted service. Dr. Holman's career has been largely shaped by the influences which guided its early stages. He commenced his professional curriculum as a pupil to Messrs. Thomas and Peter Martin, a firm of medical practitioners in Reigate. Mr. Thomas Martin took part with Sir Charles Hastings in the foundation of the Association, which was destined to develop into the British Medical Association. In this work he was actively assisted by Dr. Holman, who at the same time acted in the capacity of assistant secretary for the Surrey Benevolent Society, in connection with which he first met Propert, the subsequent founder of Epsom College. Circumstances thus brought him in the earliest years of his career into contact with the three great institutions to which he was destined to give up so much of his life. At Guy's Hospital he won many distinctions, and after qualifying, he eventually settled in Reigate in 1852, and was shortly afterwards appointed joint secretary of the South-eastern Branch of the British Medical Association. He subsequently became treasurer of the Association, and has for no less than 20 years been treasurer of Epsom College. These and many other signal services which Dr. Holman has rendered to his profession and to the cause of charity have made it seem desirable to his friends and colleagues to put on record, while he was still living and among them, some memorial of their appreciation of the great work he has performed. A testimonial fund has, therefore, been opened, and it is proposed to devote the proceeds to the erection of an art and reading-room at Epsom College, to be called "The Holman Art and Reading-room." Many contributions have already been received, and there can be no doubt that the scheme is one that will heartily commend itself to all those, both within and without the profession, at home and abroad, who have knowledge of the great and good work which Dr. Holman has done. Subscriptions of any amount will be received and acknowledged by Dr. John H. Galton, Chunam, Sylvan Road, Norwood, London, S.E., treasurer of the fund.

Despite Sir Henry Thompson's great age. the announcement of his death came with a shock of surprise to those who had seen him only a day or two before going about as usual in his motor car. Sir Henry was born on August 6th, 1820, at Framlingham, in Suffolk. His father was a strict Baptist, who strongly objected to his son becoming a doctor, but young Thompson's mind was made up as to the course in life which he meant to follow, and, in accordance with the custom of these days, he became apprenticed to a local surgeon. In 1848 he entered University College Hospital, and, after an unusually successful career as a student, he took the diploma of the Royal College of Surgeons of England in 1850. A year later he proceeded to the degree of Bachelor of Medicine in the University of London, and in 1853 he was elected a Fellow of the Royal College of Surgeons, England. Among his many distinguished patients was the late King Leopold of Belgium, upon whom in 1863 he successfully performed a serious operation. He also attended the Emperor Napoleon III, when living in exile at Chiselhurst, in 1873. His literary work was popular as well as practical, and in addition to the special subjects connected with his own profession, of which he was master, he took the widest interest in the topics of the day, and was the author of a large number of articles dealing with such diverse subjects as "Cremation," "Diet in its Relation to Age and Activity," "Moderate Drinking," etc. Probably his advocacy of cremation is the work by which Sir Henry Thompson will be longest and best known to the general public. He had some claims to being a novelist, and under the *nom de plume* of "Pen Oliver," he wrote at least two works of fiction which attracted some attention. He was, however, more successful as an artist than as a novelist, having inherited a considerable amount of artistic talent from his grandfather, Samuel Medley. In 1851 he married Miss Kate Loder, the famous pianist, by whom he is survived, together with one son, Sir Herbert Thompson, who succeeds to the title.

At the annual meeting of the Hospital Saturday Fund held at the Mansion House on Saturday, April 23rd, the Lord Mayor, who occupied the chair, was able to announce the accomplishment of a record year. There was a large attendance, and the following interesting statement on the result of the year's work was made by Sir Savile Crossley, M.P., chairman of the Fund. Sir Savile said that he was glad to inform the meeting that they had again broken the record, and succeeded in securing more money than before. The sum amounted to £23,674. This money, moreover, was collected without trespassing on the ground covered by the King Edward Hospital Fund and the Sunday Fund. The fact that these two funds had also increased was a matter of great satisfaction. With regard to the expenditure, he pointed out that when the Fund was instituted, the expenses averaged 29 per cent. for every £100 collected, but a great and remarkable reduction in the cost of collecting had been achieved. Although they had done away with street collections, the expense of collecting had come down to 10 per cent.

On the evening of Friday, April 22nd, Colonel David Bruce gave a lecture, illustrated by limelight views, before a large audience at the Royal Institution on "Sleeping Sickness in Uganda." The area of the disease, which was absolutely fatal, and the symptoms of which the lecturer explained, with the aid of the lantern slides, extended along the shores of Lake Victoria and of the islands, as well as to some distance up the Nile, the interior of the country being free from it. In every case of the sickness the trypanosoma parasite was found in the blood and in the cerebospinal fluid, and it was not found in the case of other diseases. It was detected in 28 per cent. of the population of the sleeping sickness area, but in none of those living outside that area. Monkeys inoculated with the trypanosoma passed through a long chronic illness, quite similar to that experienced by the human patient. It was traceable to the bite of the tse-tse fly, the distribution of which was the same as that of the disease, and it had been shown by experiment that the tse-tse parasite could carry the parasite from a sick to a healthy subject. The natives were continually passing to and fro by the shores of the lake and the islands. They sat about the shores and got bitten by the fly, and were, therefore, very liable to the disease, which was not found in the grassy regions, but prevailed in the wooded districts along the lake shores.

The annual meeting of the General Council of King Edward's Hospital Fund for London, to receive the accounts and report for the year 1903, was held at Marlborough House, under the presidency of the Prince of Wales, on March 8th. Mr. Hugh C. Smith pointed out, in seconding the adoption of the certified accounts, that the annual subscriptions in 1903 were £4100 more than the previous year. The League of Mercy gave £2000 more, and the income from investments was £16,200 more, owing to the munificent gifts of Lord Strathcona and Lord Mount Stephen, though, on the other hand, the donations were less. The amount taken from reserve so as to maintain the distribution to the hospitals on the same scale as in 1902 was £18,751 9s, but in 1902 and 1903 the amount distributed to hospitals was exactly double what they distributed in 1901. The Prince of Wales, in moving the adoption of the report, stated that, despite the present existence of financial depression, the accounts pointed to a steady and gradual increase of the Fund. The contributions amounted to £30,000 more than in 1901, which might be considered the last normal year, and the sum of £100,000, which had been distributed, was almost double that of 1901. He expressed the gratitude of the Council to all who had supported the Fund during the seventh year of its existence. The investments taken at cost amounted to £234,037, and the securities received by the Fund, as valued at the date of their receipt, amounted to £430,218; making a total of invested capital of £664,255. He announced that within the past few days he had received from a personal friend, who desired to remain anonymous, the following letter:—"Sir,—I regret to learn that the assured income of the King's Hospital Fund from investments and other permanent sources only amounts to about £36,000 a year, which is £14,000 a year less than, two years ago, it was hoped the fixed income of the Fund from endowments, etc., would have reached by this time. It is clear to me that there is no better way of benefiting the sick poor of London than by supporting the King's Hospital Fund, and that it is a matter of the greatest importance to the London hospitals generally as well as to the success of the Fund itself that it should as speedily as possible be placed in a position to enable it to make an annual distribution among the London hospitals of not less than £150,000. If the King's Fund had an assured income from investments and other permanent sources, of, say, £50,000 a year, I believe that it would not be very long before the income from subscriptions and other sources would amount to £100,000 a year, making a total of £150,000 a year available for distribution, and placing the King's Fund in a position to exercise a most beneficial influence and control over the management of every London hospital. To help this most desirable object, I have decided to anticipate a provision in my will, and instead, to hand over to the King's Hospital Fund, by way of gift, securities representing the capital sum required to provide one-third of the £14,000 a year deficiency, on condition that the remaining two-thirds, £9332 per annum, is provided for. This offer to be good and to remain in force till December 31st next, 1904. I do not attach any other conditions to this offer, but would like to express a hope that your Royal Highness, as President of the King's Hospital Fund, may see your way to prevent any portion of the funds subscribed for the relief of the sick poor being diverted to purposes of medical education. Trusting your Royal Highness may be placed in a position to enable you to avail yourself of my offer."—The Prince expressed his warmest thanks to his friend for this noble effort to assist in the good work initiated by the King, and also tendered his gratitude to the General Council and honorary officials for their zealous and self-sacrificing efforts.—The Bishop of London congratulated his Royal Highness on the letter he had read, and spoke of the steadiness of the increase in the number of beds—433—which had been opened through the instrumentality of the Fund. On a basis of 2½ per cent., the value of the securities offered by the anonymous donor to the Prince, in order to provide £4668 per annum, would be £186,720.

The War Office has recently authorised the appointment of eight dental surgeons for duty with troops in the United Kingdom. They will be required to devote their whole time to the service of the army, and will receive an inclusive salary of a pound a day, plus travelling expenses. As at present arranged, the dental surgeons will be stationed at Aldershot, Devonport, Cork, Edinburgh, Portsmouth, Dublin, Colchester, and Woolwich, but in the matter of attendance they will be subject to the direction of the general officers in command of the various districts. Nothing has been more clearly proved by modern research than that a healthy condition of the mouth is a safeguard against many serious diseases. This innovation may therefore be greeted as a useful reform in the interests of Tommy Atkins.

Tasmania.

(FROM OUR OWN CORRESPONDENT.)

The Transactions of the Sixth Session of the Intercolonial Medical Congress—Dr. Elkington's Tour through Tasmania—The Medical Defence Association of Tasmania—Suggested Union of the Hobart and Launceston Medical Societies.

The transactions of the Sixth Session of the Intercolonial Medical Congress, held in Hobart in 1902, have been published after no little delay—a delay caused partly by the presence of work at the Government Printing Office and partly by the negligence of many authors in submitting papers and proofs. This negligence has been the cause of much inconvenience to the literary committee; and the officers of the approaching congress at Adelaide would find it do much to lighten their labours if a rule were made to the effect that no author be allowed to read a paper before Congress unless he has already furnished a typewritten proof to the secretary of his section. It is to be hoped also that in future an attempt be made to publish the transactions not later than six months after the meeting of Congress. If such were done, members and the profession generally would doubtless read the various papers and find much to interest them; but how few of us in the present plethora of medical literature can be expected to wade through the papers and discussions of two years ago? Doubtless a review of the transactions will appear in your columns, so that I shall content myself by observing that the book is well printed, contains some excellent illustrations, and many interesting papers.

Dr. Elkington, the Chief Health Officer, has been making a tour of the State, inspecting its sanitary machinery, and advising the different town boards in various health questions.

The annual meeting of the Medical Defence Association of Tasmania was held in February. The report is not altogether a satisfactory one, as it shows a decrease in numbers, only 27 members being now on the roll. It is to be deeply regretted that the medical men here are so apathetic as regards this and other movements which have for their object the welfare, dignity, and good repute of the profession.

Cannot an effort be made to unite the two local medical societies of Hobart and Launceston into one strong society, which will embrace in its membership the profession of the whole State ? Such a society would do much to cultivate friendly relations amongst its members, to encourage scientific work, to stamp out any unprofessional conduct which may exist, and to safeguard the interests of the profession generally. Is there any chance of the Council of the New South Welsh Branch taking the matter up ? An organising visit from one of its number would effect more than local action could do.

South Australia.

(FROM OUR OWN CORRESPONDENT.)

The Consumptive Hospital Question—The Dental Act—Street Expectoration—A.N.A.—Hospital Alteration—Public Benefactor.

FOR some time the State has been provided with suitable sanatoria for the treatment of pulmonary tuberculosis in its early and curable stage. These institutions have, however, suffered from unsuitable advanced cases having been sent to them. Naturally, such patients have scoffed at the open air treatment, and those who are responsible for the management of the sanatoria have protested against them being brought into disrepute. In addition to this, the Adelaide Hospital authorities have decided that only a limited number of phthisical patients can be taken into the wards, and they have a great aversion to accepting even these. Under the circumstances it became necessary to find accommodation for hopeless cases of pulmonary tuberculosis. The City and Suburban Boards of Health approached the Government, who decided to renovate a portion of the old lunatic asylum buildings on North Terrace, and to devote them to the purpose. This decision was heartily approved of by a large majority of the profession, but was bitterly opposed by the lay press, which did not hesitate to impute unworthy motives to the Adelaide medical men. It was openly stated that the doctors supported the low-lying city site in preference to the elevated country site at Belair, because it would suit their own convenience. It was finally decided by the Government to use the buildings on North Terrace, and several hundred pounds were spent in making them suitable for consumptives. Certainly no fault could be found with the selection. The cottages were admirably adapted for such cases, being well ventilated, well lighted, and surrounded by lawns bathed in sunshine, and easily accessible to friends of the dying patients. At the last moment all arrangements were upset by an offer from Mr. J. H. Angas, of Hope Lodge, at Belair, which had been previously used as an inebriate retreat. The offer was conditional upon the North Terrace site being renounced as a home for advanced consumptives. An early answer was requested. Being placed in a quandary, the Government asked for the advice of the local Branch of the British Medical Association. Not wishing to commit themselves without having inspected the two sites, the members decided to visit Belair and inspect Hope Lodge. The Government was informed of this decision, but replied that it was not necessary to put members to the inconvenience of visiting Belair, as Mr. Angas's offer had been accepted. Mr. Angas has since died, and it is probable that an attempt will be made to modify the terms under which Hope Lodge was granted. It certainly seems illogical to send dying consumptives several miles away from their friends to an exposed house on a bleak and windy hill. Hope Lodge is a two-story building without a lift. This in itself is no small objection, for advanced consumptives are ill suited for climbing stairs. The Boards of Health are now trying to obtain the buildings on North Terrace for the purpose of a fever hospital. This has been rendered necessary by the action of the Adelaide Hospital Board in refusing to admit any infectious or contagious febrile disease other than typhoid fever.

When the Dental Act was passed it was hoped that the public would be protected and that the status of the dental profession would be raised. It is not by any means certain that either of these consummations will be realised, if one is to judge by the way the Act is being administered by the Dental Board. The professional status of the Board is a low one, as only one member of it possesses a diploma which is recognised under the Act. The Board seems determined to make dentistry in Adelaide a close borough, as the following case shows :—Dr. William Driscoll, a graduate in dentistry at the University of Kansas City, lately applied for registration, and was refused. His ability as a dentist was not questioned. The Board simply declined to admit any dentist with an American diploma. It may be stated that two out of the four dentists on the Board possess American diplomas. It appears, therefore, that however gifted a foreign dentist may be, unless he possesses the Sydney or an English diploma he will be refused the right to practise in South Australia.

Notwithstanding the notices which adorn every street, expectoration in streets has not abated one jot Nor does it seem likely to, until the magistrates make an example of some offenders, and so call attention to the pains and penalties which await those who sin in the same way.

Trouble with the A.N.A. seems to be brewing. It is not unlikely that eventually a battle similar to that fought in New South Wales will have to be waged here. Negotiations are proceeding at present between the Association and the Medical Defence Association.

The operating theatre at the Adelaide Hospital has been completed. The fittings have been provided by Hannam & Co., of Sydney. A steriliser for hot and cold water has been installed at the Children's Hospital. The Queen Victoria Maternity Home has turned out to be a great success, and certainly supplies a want. Patients to the number of 170 were admitted during the year. Only the very poor are admitted. A wise discrimination is used by the committee, and very little abuse seems to be made of the charity.

Mr. J. H. Angas, who died recently, was a very liberal supporter of the Children's Hospital. About ten years ago the Angas Buildings were erected at his expense. Since then he has made numerous donations. Without his assistance it is very doubtful whether the hospital could have obtained its present state of development.

HONORARY SURGEONS TO HOSPITALS.

(To the Editor of the Australasian Medical Gazette.)

Sir,—Your correspondent, Dr. E. Sydney Hawthorne, when he says he has come to a conclusion directly opposite to mine about accepting honorary appointments to country hospitals, concludes by stating: " It is my firm belief if country hospitals gave free access to all medical men practising in the town to treat their own patients "—that's just what they do not do. He puts the words last which I have quoted from his letter. Had he placed them first there would have been no need for the very imaginative and unconvincing " reasons " for his belief in acting as honorary when there is a fee to be got. So long as the hospital authorities do not allow all district medicos to treat their poor patients there, so long will these institutions continue to be run in the interests of the hospital doctor. I can trace patient after patient lost to me through this, and in any case I fail to see how my demanding payment from the patients or their friends who may be able to pay it makes the slightest difference between me and my hospital colleague.

In conclusion, I beg to say that I do not think your correspondent has convinced anyone that the doctor not holding the local hospital appointment betters himself financially by being at the beck and call of the paid man night and day for all conditions of patients, rich and poor.—I am, etc., AQUA.

EXPERIMENTAL CARCINOMA.

(To the Editor of the Australasian Medical Gazette.)

Sir,—In a leading article of your last issue the writer makes a statement that Mr. Keith Monserrat has cultivated a parasite from carcinoma mammæ and claimed "to have succeeded in inoculating animals and reproducing carcinomatous growths in them." In his report to the Scientific Grants Committee of the British Medical Association, Mr. Monserrat made no such claim; he stated that he had cultivated an organism from certain cases of carcinoma mammæ which was capable of causing cell proliferation of various organs when injected into animals, and that thereby a formation was produced which consisted of these proliferated cells supported by more or less fibrous stroma. The insuperable objection to considering these growths to be carcinomata is the fact that the metastases consist of proliferated cells of the organ in which the metastasis is formed. This is *never* the case with carcinomata. In them the metastasis is formed by the proliferation of cells carried away from the organ in which the original growth occurred. Mr. Monserrat gives one doubtful instance of a true malignant metastasis of peritoneal endothelium (a mesoblastic tissue by the way); but as peritoneal endothelial cells are only modified connective tissue cells, I should think that it would be rather difficult to distinguish them from the connective tissue cells which are found in all organs of the body, and which, moreover, line the blood or lymph vessels by which the cells would be carried to form the metastasis. Thus we see that this "cancer parasite," like every one previously discovered, not only does what the true carcinoma does not, but also leaves undone the things which it ought to do. When a carcinoma has been artificially induced, which will give rise to epithelial metastases similar to those of true carcinoma, it will then be time to talk of Koch's postulates. Another objection to recognising *any* of the so-called cancer parasites as such is that whilst *cultures* of them give rise to growths in animals, the implantation of fresh cancer tissue never does so.

Mr. Monserrat tells us that the vitality of these organisms is materially diminished by cultivation in vitro. Why, then, will they not grow when a fresh piece of cancer is implanted? The real difficulty in isolating the cancer germ consists, I believe, in the fact that, like the mysterious Mrs. Harris, " there ain't no sich person."—I am, etc., ARTHUR S. VALLACK.

Bowral, N.S.W.

A MIDWIFERY NURSES' ACT.

(To the Editor of the Australasian Medical Gazette.)

Sir,—Dr. Spencer's letter in the last number of the GAZETTE on "A Midwifery Nurses' Act," raises a matter which I intended to bring before the profession at a later date. The registration of midwifery nurses was earnestly considered by the Royal Commission on the decline of the birth-rate, and it received unanimous approval that some form of registration should take place, and it is also the feeling of the profession and nurses. There are two ways of doing it to my mind—a right way and a wrong one.

First: State registration pure and simple. In this the nurse having passed the necessary examination would be given a certificate; she would pay a fee, and then she is there practically for life, whatever she may do or however she may conduct herself. I make this statement with the full and practical knowledge of its weight and importance. We have not to consider the ideal, but what is attainable, and we have examples before us. I am a member of the Medical Board, and, as we all know, there are some members of our profession whom we would very gladly strike off the register, but we find it impossible to do so. If this is the case where there is a body told off, so to speak, to look after these matters, how would it be possible to deal with nurses who misconducted themselves? Who would or could take action? To have supervision, which every one must concede would be necessary, there must be inspectors, etc., and that would cost money. To try to get it out of the Government would be useless; to make the nurses pay would be a great hardship; so that it would resolve itself into what obtains in another State whose Act was praised up to me as a most excellent one, but all I saw in it was that the nurse paid one pound into the consolidated revenue; she got her certificate, and she can do whatever she likes.

Second: Registration by the State through an incorporated body. This is, in my opinion, the right way. Each one of us has had, I hope, instilled into him the necessity of minding his own business. The medical profession could not be carried on under modern conditions without the aid of nurses, both obstetric and general, so it is essentially the business of both. The medical profession is incorporated, the pharmacists, the law, and others, and they manage their own affairs. Now we have an excellent institution—the Australasian Trained Nurses' Association—which has already done a vast amount of good in furthering the interests of the nurses, and I am strongly of the opinion that that body should be incorporated. As far as I see, and I have given a great deal of consideration to the matter, it is the only way to get the status of the general nurse improved by State registration, and I cannot agree that the latter should not be placed in as good a position as the obstetric nurse. The time for action has not arrived. We must wait the result of the elections, and it will be some months before anything can be done; but if the profession and nurses are agreed as to what they will ask for, there will be no difficulty whatever in getting it. Let each one consider what is preferable—either State registration or State registration through a corporate body, not necessarily the A.T.N.A., where you have control of your own members and your own business. You want to consider also what you are to aim at. To suppose, as some do, that after a number of years only registered nurses should attend cases, is flying to the heights of absurdity, simply because it is a physical impossibility. I went carefully into that aspect with the Government Statistician. You cannot interfere with people's liberty, as to what they should do or whom they will have to attend them any more than you can force people to be attended by qualified medical men. Besides, how can you force people to pay a qualified nurse's fee in all cases? There are a great many aspects which it is needless to enter on. What I would like to see is a meeting of the profession, or the profession and nurses, to decide what form to apply for, and elect a small committee of four or six. We can have every assistance in getting a bill drawn up, and it could then be submitted again if necessary to another meeting. The principles only are what ought to engage our attention at present; the details are then easily filled in.—I am, etc.,

J. FOREMAN.

141 Macquarie-street, Sydney.

OBITUARY.

SAMUEL DOUGAN BIRD, M.D. (St. And.), 1859, M.R.C.S. (Eng.), 1854, L.R.C.P.L., 1861, M.D. (Melb., *a.e.g.*), 1862.

Dr. S. Dougan Bird, whose death occurred on May 15th, was one of the pioneers of Medicine in Victoria. He landed in the colony in 1861, after a brilliant career at King's College, London, and many varied experiences in the Crimean war. He was one of the first physicians appointed to the Alfred Hospital, and worked there for many years. He held the position of Lecturer in the University of Melbourne, first in Materia Medica and then on Medicines. He wrote a book much quoted years ago on the Australian Climates, and his *brochure* on hydatid of the lung is the classic on the subject. He had at one time the largest consulting practice as a physician in Melbourne, but of late years he devoted himself mainly to the Australian Mutual Provident Society, of which he was chief medical officer for many years. He was an excellent linguist, very well read, and wrote much for the medical and lay papers in years gone by in very good literary style. As a lecturer he was highly successful. He was decorated with the Crimean medal, the Sebastopol medal, and the Turkish Order of the Medjidie. He died in the 72nd year of his age.

GEORGE PROWD LAMBERT, M.R.C.S. (Eng.), 1852, Berrima, N.S.W.

We regret to record the death of Dr. G. P. Lambert, of Berrima, which occurred suddenly on the morning of June 4th in his 79th year. The deceased has been practising in that place for the past 30 years, and was well known and highly respected throughout the district. He has left a widow and a large grown-up family. Dr. Lambert had been for 28 years Government medical officer for the district.

The Proposed Hospital for Consumptives in Adelaide.

AT the last monthly meeting of the South Australian Branch of the British Medical Association a request from the Chief Secretary was considered, asking whether, in their opinion, North Terrace or Belair was the more suitable place for the proposed home for incurable cases of consumption. As the notice given was a very short one, and many members had not had the opportunity of inspecting the Belair site, it was thought better that this should be done before expressing an opinion, and a visit was arranged. The Chief Secretary was notified to this effect, but an intimation was received from him on the following day that the Government had accepted the offer of the Belair Retreat, and that the Branch need not trouble to consider the matter further. This, however, seemed so unsatisfactory a position for the Branch to be placed in that several of the members thought it advisable to call a special meeting to consider the whole question of the establishment of a consumptive hospital, as they thought that the opinion of the Branch, having once been asked, it was only right and just that that opinion should be made public. An inspection of the Belair Retreat was consequently made, and at the special meeting of the Branch held at the University on Thursday, May 12th, the question was discussed, and the following report was drawn up:—

The first point to be considered in the question, and one emphasised very strongly by the meeting, was the class of patients whom the institution is intended to accommodate. These are the cases in whom the disease has advanced so far that there is no prospect of their recovery.

For them all that can be done is to alleviate their sufferings, and at the same time minimise the risk of their communicating their complaint to others. Many of these at the time of seeking relief are acutely ill, and absolutely unable to make a long journey before reaching the home. Others, though perhaps physically able to undertake the journey, will not leave their homes to go to a place where it is difficult for their friends and relatives to spare the time and expense of visiting them, and the majority of them are so ill, both with consumption and the complications attendant on its later stages, that they need the constant supervision of a medical man. As a consequence, the meeting was of the opinion that should Belair be the site chosen, the benefit to the community would be very much decreased, by its failing to attract the very class of patients that most require to be relieved. The result, therefore, would probably be that a large proportion of these patients would prefer to remain at home with their friends, or occupy beds in the Adelaide Hospital as they do at present.

The chief point urged in favour of Belair was that the climatic conditions there were eminently suitable for the treatment of consumptive patients. While no one can deny the importance of abundant fresh air as a curative agent in the treatment of consumption, it must be remembered that the class of patients are those for whom such treatment is of little avail; and attention must be directed to their comfort rather than to their cure. Many of these patients will have other diseases complicating their original complaint, more especially bronchitis and other chest affections, and it is almost certain that the strong bleak winds that sweep across the exposed position in the winter will be a great source of discomfort to them, as even the cases in an early stage take some time before they get used to these conditions. The sudden changes of temperature, too, that occur in the summer in the hills, though grateful to the healthy person, will be acutely felt by those who have had their resisting powers enfeebled by their complaint, and it is, therefore, more than doubtful whether the climatic conditions will not be more a disadvantage than an advantage to them. The building itself, though much too large for the number of patients it is intended to accommodate, could be doubtless made into a very good home, but at present the ventilation is entirely inadequate, and the expense required to place it in a proper state for the reception of patients would be very considerable.

The advantage of the large grounds that surround the building would be lost, as the majority of the residents will be incapacitated from making any use of them. With regard to ths proposed site on North Terrace, the opinion of the meeting was unanimously favourable, for the following reasons:—1. The situation is a central one, and easy of access, both to the patients and to their friends, and at the same time it is well isolated from surrounding buildings and residences. 2. It can be reached by those who are acutely ill with their complaint without the necessity of a long journey by train or ambulance. 3. The cottages are already prepared, and require no further expenditure for alterations before occupation. 4. Its close proximity would enable it to be worked in conjunction with the Adelaide Hospital by the same staff, thus doing away with the necessity of a resident medical officer, who would be required at Belair.

The objections that have been raised against the site have been:—1. That the site is low-lying, foggy, and dusty. These statements are incorrect. The site is at a higher elevation than the Adelaide or Children's Hospitals; and those best qualified to judge consider that it is neither unduly foggy nor dusty. 2. It has been alleged that the position is gloomy; those who have visited and inspected the cottages know that such is not the case. 3. Statements have been promulgated that the home would be a source of danger to the neighbourhood by the spread of infection. With regard to this question the meeting desired to draw attention to the exaggerated conception of the infectiousness of consumption which is now current, owing, no doubt, to the increased attention paid to this phase of the disease during recent years.

An important step in progress was gained with the public recognition that consumption was infectious, but the danger, once recognised, is reduced to a minimum; for the infective organism is known, its source is known, and the means of destroying it are easy. So far, therefore, from being a danger, the aggregation of consumptives in a home is a distinct safeguard against the spread of infection, for its inmates are compelled to adopt measures to destroy the germs. One single consumptive, free in the streets, and expectorating where he will, is an infinitely greater danger to the community than a home of consumptives, which might justly be looked upon as an institution for the destruction of tubercle bacilli.

As a result of these opinions, the meeting considered that if cases of advanced consumption are treated at North Terrace there will be no increase of risk to the neighbourhood, to the community at large, or to the friends of the patients, however frequently they may visit them, and that North Terrace, from its central position, is to be preferred to Belair as a site for a home for the treatment of incurable cases of consumption. The meeting fully recognised the generosity of the gift of the Belair Retreat to the people, so in keeping with many other generous actions of Mr. Angas, and regret that they cannot recommend it to be utilised on the lines suggested.

Should, however, it be feasible to locate the Home for Incurable Consumptives at North Terrace, the meeting would suggest that the Belair Retreat would be of great use to the community as a home for convalescent consumptives. Under these conditions, the spacious grounds, instead of being practically useless to the inmates, would afford the means of recreation and of healthy outdoor employment in their cultivation.

The following correspondence, which explains itself, has been forwarded to us for publication:—

(Copy.)

Adelaide, 14th May, 1904.

Sir,—I am directed to inform you that the following resolution was passed at our last meeting:—"That this meeting of the S.A. Branch of the B.M. Association very strongly protests against the writer of the leading article in the *Register* of 25th April, attributing such unworthy motives to the medical profession. It also considers that the exaggerated and dramatic language and biassed tone of the article is very much to be deprecated, and most misleading to the general public."—I am, sir, yours faithfully,

(Signed) John B. Gunson, M.B.
Hon. Secretary, S.A. Branch.

To Editor, *S.A. Register*, Adelaide.

(Copy.)

The *Register* Office, Adelaide,
18th May, 1904.

Memo. from the Editor.

Sir,—I received last night yours of 14th instant intimating that the local Branch of the British Medical Association had decided (1) That an article in the *Register* of April 25 attriubted unworthy motives to the medical profession; and (2) that its literary style was unsatisfactory. My reply is (1) That the imputation of such motives was not intended in reference to highly honorourable gentlemen for whom the *Register* has fought many and many a time; (2) judgment on literary style must always be a matter ol opinion, and criticism from any source is welcome, as tending to greater excellence.—I am, yours faithfully,

(Signed) Will. J. Sowden.

To Dr. John B. Gunson, Adelaide.

PRACTICES FOR SALE.

N.S.W.: Prac. in large town, cash income £600, appts. £200. Price £250; est. 8 yrs.

N.S.W.: Prac. in which £500 yearly can be saved. Furn., horses, everything, £400.

N.S.W.: Prac. near Syd., to be sold with house and land (1 acre). Property £1,280. Prac. £300.

Tas.: A City Prac., returning £800. Cash, appts., £300. Prompt buyer, £200.

Queens.: Coastal Prac., returning nearly £1000. Appts., £320. Furn. and Prac., £500.

Fiji: Prac. returning £700 cash. Price, £200. Books verified by solicitor.

N.Z.: Country Prac., returns over £1000 cash. Horses and other appt., £220. Price, £800.

N.Z.: Unopp. Prac., cash take over £500. Est. 13 yrs. Price £200. Nice house, 3 acres land.

Mr F. W. LOXTON,
16 O'Connell-street, Sydney.—[Advt.]

PUBLIC HEALTH.

New South Wales.

Health of the Metropolis.—Dr. W. G. Armstrong, the city officer, reports :—The total number of deaths registered as having occurred within the metropolis during May, 1904, was 516. Omitting those which do not belong to the metropolis (deaths of residents on shipping and islands in the harbour, residents of the country who died in metropolitan hospitals. and patients in the Gladesville and Callan Park Hospitals for the Insane), the number proper to the metropolitan municipalities was 481, which is 69 more than the number for April. and corresponds to an annual death rate of 11.17 per 1000 of the estimated mean population for the year. Corrected for the metropolitan proportion of deaths in all benevolent asylums and hospitals for the insane, the rate above quoted is increased to 12.03 per 1000. During the month, 28 deaths resulted from the principal infectious diseases ; of these one was referred to measles, one to scarlet fever, five to influenza, four to whooping cough, seven to diphtheria, nine to typhoid fever, and one to bubonic plague. Diarrhœal diseases, including diarrhœa, dysentery, gastro-enteric catarrh and enteritis, caused 29 deaths, which number is 18 less than in April and 15 less than the average number of deaths from the same causes in May during the previous five years. Phthisis caused 48 deaths, the quinquennial average for May being 42. This number (48) has not been equalled in any month since December, 1902, when 53 deaths from phthisis were recorded. Other diseases of the respiratory organs caused 54 deaths, of which pneumonia was responsible for 29, and bronchitis for 16. Infant mortality was low; 107 deaths of children under one year of age were registered, corresponding to an infantile mortality rate of 95 per 1000 births ; 23 deaths of infants were due to enteritis, 21 to prematurity, and 31 to developmental causes. The record of the number of persons attacked by the notifiable infectious diseases during May is, excepting as regards diphtheria, very satisfactory. Of scarlet fever, 89 attacks were notified, compared with 399 in May, 1903, and an average number for May during the previous five years of 125. Diphtheria attacked 72 persons, while the previous five years' average for May was 47. Of typhoid fever, there were 56 attacks notified ; the number notified during the corresponding month in 1903 was 110, and the average number for five years was 78.

Vital Statistics.—According to the Government Statistician, during the month of May 1124 children were born (611 males and 513 females). In the same period 502 persons died, 276 being males and 226 females. The birth record is 44 more than the average for May during the previous five years, whilst the deaths are 32 higher than the mean rate for the same period. The birth rate was 2.20 and the death rate .98 per thousand. The excess of births over deaths was 622. The births, relatively to population, are on a par with the mean rate for May during the last 10 years. The illegitimate births numbered 89, and comprise 8 per cent. of the total births. The deaths, numerically, are higher than, but proportionally present similar aspects to, the mortality rate for the month of May during the last 10 years. Amongst children under one year of age there were 22 deaths in the city and 84 in the suburbs, equivalent respectively to infantile rates of 102 and 92 per 1000 births ; or, on the whole, to 94 deaths of infants per 1000 births in the metropolis. Of persons aged 70 and upwards there were 78 deaths (35 males and 43 females), at the following ages :—61 ranging from 70 to 79, 15 from 80 to 89, and one each at 90 and 97.

The Bubonic Plague.—On May 24th a plague-infected rat was discovered in Darlington, this being the first one caught in one of the suburbs during the present outbreak. The Health Board in co-operating with the municipal authorities of Darlington set to work to cleanse some unclean premises in the neighbourhood. This spot is not far from Abercrombie-street, where infected rats were caught during a previous plague outbreak. The Water and Sewerage Board have consented to fumigate the sewers. On May 27th an employee of the Sydney Harbour Trust, who was handling rats, caught on one of the Darling Harbour wharfs, was discovered to be suffering from plague, and was in a serious condition. The Harbour Trust have kept a steam tug constantly employed at night steaming the wharves with a powerful steam jet. Some idea of the extent to which the harbour is polluted may be gathered from the fact that from April 1st to May 27th the following refuse was removed from the harbour and destroyed :—288 dogs, 152 cats, 814 rats, 64 bags of meat, 51 bags of fish, 252 fowls, 2 sheep, 4 pigs, 2 bags of chaff, 3 calves, 32 rabbits, and 2 wallabies. The City Council is still taking precautions to prevent the plague spreading. Mr. Nesbitt, the town clerk, states that the public are not co-operating with the council in the matter, and he spoke strongly of the indifference shown by the public, and thought that if another outbreak occurred the citizens would be mainly responsible for it. A further case of plague was discovered after the death of the patient in the Coast Hospital. The source of infection has not been traced.

Queensland.

Smallpox.—The steamer " Empire " sailed from Yokohama on May 7th, and Kobé on May 11th A call was made at Hongkong on May 15th, and subsequently the " Empire " reached Manila. At this port a lady passenger, aged 43, joined the vessel. When she boarded the " Empire " she was apparently in good health, but on the way to Thursday Island she developed smallpox. It subsequently transpired that the husband of the patient had died of smallpox but a few days before she embarked on the " Empire." Thursday Island was reached on May 26th. A call was made at Townsville for the purpose of landing the affected passenger at the quarantine area at Magnetic Island, and then the vessel proceeded direct to Sydney instead of calling at several other Queensland ports as usual On arrival at Sydney on June 3rd all the passengers and crew were landed and placed in quarantine at North Head for the usual period. No further case having occurred, they were released. The patient landed at Magnetic Island has now recovered.

Bubonic Plague.—Up to the week ending June 11th the total number of cases that have occurred in Brisbane since February 10th, 1904, 21 ; the total number of cases that have occurred in Cairns since February 16th, 1904, 2. Rats examined at Bacteriological Institute, 272 ; rats infected, 16 ; mice examined at Bacteriological Institute, 169 ; mice infected, nil ; rats destroyed, 213 ; mice destroyed, 235 ; total number of rodents destroyed, 905.

Victoria.

Food Adulteration.—In the annual report of the City Analyst for Melbourne (Mr. F. Dunn) he states that during the year 1903 he analysed 149 samples of food. He tested 48 samples of milk, of which 16 were deficient in non-fatty solids, 1 was short at least 14, and most probably 36 per cent. of fatty solids ; 13 contained added water varying from 3 to 13 per cent. ; 15 had been artificially " coloured," and 10 were found to have been " doctored " with boric acid. In one sample of concentrated milk there were 451 grains of boric acid to the gallon of milk, whilst another gave 182 gr. of boric acid and a trace of formaldehyde. A sample of " coffee " gave at least 50 per cent. of chicory. " Very little, if any, raspberry juice " was traced in four samples of alleged " raspberry vinegar " analysed, colour being got in three of them by artificial " aids," whilst one contained 28.9 grains of sulphur dioxide to the imperial gallon. Thirteen samples of sago were found upon examination to consist of tapioca. Samples of gin, rum and whisky, which were analysed, were mostly found wanting in amount of alcohol contents. The results of the tests conducted by him during the year on behalf of the corporation lead the City Analyst to urge strongly the necessity for inserting a clause in the Health Act similar to that of the Wine Adulteration Act, which prohibits the use of boric acid, formalin, etc. He points out that " according to the present Health Act not only must the presence of the preservative be proved, but the analyst must make a careful quantitative analysis, and it is also necessary to prove to the satisfaction of the bench that the quantity is injurious to health, this latter evidence resting on the medical experts, two of whom can hardly be found to agree on this matter. If the clause mentioned were inserted in the Health Act no difficulty would be found in prosecuting in those cases where preservatives are detected."

HOSPITAL INTELLIGENCE.

Royal Prince Alfred Hospital.—At the monthly meeting of the Board of Directors of the Royal Prince Alfred Hospital held last month a report was received from the Agent-General, and from the committee appointed in London to select a matron, which comprised Dr. G. Schorstein and Miss Rosalind Paget, with the chairman of the hospital (Professor Anderson Stuart), to the effect that, from a large number of candidates from Great Britain, Canada, and America, Miss Mabel Newill had been unanimously selected. Miss Newill had been very highly recommended, and the committee of selection had expressed the opinion that she was in every way suited for the position. It was reported that the new matron would proceed to Australia via America, where she would spend a month in the inspection of hospitals and the investigation of hospital methods in the U.S.A. and Canada, reaching Sydney about the middle of July. The question of obtaining improved local organisation for the purpose of securing increased financial assistance in the districts surrounding the hospital was discussed, and the secretary reported having received very satisfactory promises of assistance from most of the Mayors of the districts affected. It was agreed that the Mayors of the surrounding municipal districts be invited to meet the board of directors in conference, on a date to be fixed, and that the house committee be asked to formulate a scheme for submission to the conference. A letter was received from Mr. W. H. Flavelle, conveying a further instalment of £200 on account of the bequest of the late Mr. Adam Guy Flavelle, and it was resolved that Mr. W. H. Flavelle be appointed a life governor of the institution. It was resolved that special consideration be given to the matter of providing increased accommodation for infants when the beds shall be allotted in the Queen Victoria Memorial Pavilions, upon their completion.

The Coast Hospital.—The members of the Board of Health recently inspected this State hospital at Little Bay. They were met by the resident medical staff, and made a tour of the wards and the leper lazaret. The Board found the establishment scrupulously clean, with all the appurtenances in first-class order, and the patients thoroughly satisfied with the attention and care bestowed upon them, both by the medical officers and the nurses. The medical members of the Board, outside the Government medical representatives, were satisfied that the whole establishment was conducted on the most approved lines.

Dubbo Hospital, N.S.W.—The committee of the Dubbo Hospital has decided to restrict the number of beds available for general cases to 12, and to reserve the fever ward for infectious cases. This decision was arrived at because of the impoverished condition of the funds. The Government has not paid the subsidy that is due.

Orange Hospital.—Extensive improvements are to be made to the hospital at Orange. The building is being enlarged and a number of alterations made, at a total cost of £3568. Last week the committee of the institution signed a contract for the carrying out of this work.

Benevolent Society's Hospital for Women, Sydney.—In connection with the Hospital for Women, Paddington, the arrangements for the opening of the outdoor department for the diseases of women were completed, and the department was opened on May 30th. The honorary staff at the hospital comprised Drs. W. H. Crago, J. Foreman, Sir James Graham, Charles MacLaurin (hon. surgeons), C. B Blackburn and E. W. Fairfax (hon. physicians and anæsthetists), A. A. Palmer (hon. pathologist), and C. V. Bowker, Windeyer, and John Harris (hon. assistant surgeons).

Proposed Infectious Diseases Hospital for Hobart.—The site selected by the Government for the proposed infectious diseases hospital for Hobart and the vicinity is meeting with strong opposition from residents in the neighbourhood, on the score that it will depreciate the value of their properties. The site is situated in Wentworth-street, Wellington, a healthy part of the city.

Royal Alexandra Hospital for Sick Children, Sydney.—The first step towards providing for Sydney a hospital for sick children which shall be worthy of this name was taken on June 1st, when Lady Northcote laid the foundation stone of the proposed new building After the president had made a short speech, explanatory of the occasion, her Excellency was presented with a silver trowel and ivory mallet to truly lay the foundation stone. The stone, a block of trachyte, bore on its polished front the inscription : " This stone was placed in position by her Excellency the Lady Northcote, C.I., on the first day of June, A.D. 1904." Then donations which had been sent along specially for the occasion were laid on the stone. Starting with £10 from Queen

Alexandra, they included £1000 from Mr. and Mrs. Walter Hall, £1500 from the trustees of the late Mr. Alex. Macleay, and £1000 (being the first instalment of a gift of £5000) from Mr. G. F. Todman. The amount "laid on the stone" was £4500, and some donations were subsequently made on the ground. Amongst the chief donations of the day was one of £32 odd, which completed a sum of £215 collected in the course of twelve months by a boy named Reggie Paxton. The hospital is to be built upon a site of six acres of land situated on the Pyrmont Bridge road, Camperdown. The land has considerable elevation, and slopes at the rear, and commands extensive views. In the building accommodation will at present be provided for 120 beds, but when the whole scheme is complete the number will have increased to 180. It will be the largest hospital of the kind in Australia, and will take the place of the old building, which is altogether inadequate for the demands made upon it. The blocks comprising the new hospital have been so arranged as to secure perfect isolation and freedom of air between the buildings. In many respects the plan is similar to the arrangements at the Royal Prince Alfred and other large and up-to-date hospitals. The design is to be carried out in simple brick treatment of the eighteenth century style. The hospital will cover a very large portion of the site. In the centre of the main frontage will be the administrative block. In this building the necessary receiving and management offices will be provided for on the ground floor, while accommodation for four resident doctors and the honorary medical staff will be found on the first floor. From each end of the administrative block there will be wings extending to the main corridor. The western wing will have accommodation for a dispensary, operating rooms, X-rays apartment, and quarters for the honorary surgical staff. The eastern wing will be utilised for kitchens, stores, medical officers, dining-room, and servants' dining-room. From the receiving and examination rooms a corridor will connect with a special pavilion containing two wards of eight beds each, on the ground and also first floors, with separate conveniences for each ward. From the same point another corridor will lead to the main corridor running east and west across the site, and giving access to the three principal pavilions. Of these three, the centre pavilion will be utilised as the surgical wards. There will be 16 beds on each floor. They will be in close proximity to the operating rooms previously mentioned. This pavilion will contain also special wards of four and two beds. The pavilion on the western side is to be the medical wards. It will be also a building of two stories, and will have provision for 18 beds on each floor, and one separation room of two beds. The pavilion on the eastern side, which it is not proposed to build at present, will be a medical block of three stories, due to the levels of the site. Each of the wards in this block will contain 18 beds, as in the other pavilions. On the extreme western limit the main corridor will extend to the pathological and laundry blocks. On the eastern corner of the site the nurses' home forms a separate building, with accommodation for a matron, four sisters, and 38 nurses, also 10 servants. The spacious sitting and dining-rooms on the eastern side of the home command the tennis court. The whole of the pavilions will be provided with 10 ft. balconies, running the full length of the wards. There will also be a large day-room attached to each pavilion. The isolation block is at the lower level, and is designed in accordance with the new regulations of the Board of Health, which require temporary provision only for patients in three separate small wards. The architects, Messrs. Kent and Budden, have imparted to the design the latest and most improved ideas in hospital management The cost of construction will be about £34,000. Of this sum, £14,000 has already been received in cash and promises, exclusive of the amount laid on the stone. We understand that the committee have decided not to call for tenders for the work until they have at least £20,000 in hand.

Bathurst Hospital.—In connection with a new operating theatre which is being erected at the Bathurst Hospital, at a cost of £1000, an additional sum of £250 was required to furnish it in an up-to-date manner. A gala day and sale of farm and other produce was held on the Bathurst show ground, to assist in raising that sum. The receipts realised over £150. The receipts from tickets and donations are yet to come.

Launceston Hospital.—At the last monthly meeting of the board of management, Dr. Ramsay, medical superintendent, reported as follows:—Remaining in hospital, May 1, 108; since admitted, 67; total treated, 175; discharged, 61; died, 3; remaining, 111. Convalescent Home.—Remaining May 1, 11; since admitted, 5; discharged, 11; remaining, 50. Patients treated at hospital during month, 203. Outpatients (attendances), 467; outpatients (fresh cases), 133; deaths, 10. Dr. L. S. Holmes gave notice that at the next meeting he would move that the salary of the surgeon-superintendent be increased. After his absence of 18 months in Europe, Dr. Ramsay had come back a more valuable man. Correspondence with the department of health concerning a scheme for providing nurses in case of outbreak of dangerous infectious disease was read. The surgeon-superintendent read a paper showing how the Launceston hospital fell short of modern institutions in Europe in construction and equipment. A vote of thanks was passed to Dr. Ramsay for his valuable paper, which was ordered to be printed.

Hobart Hospital.—At the usual monthly meeting of the Hobart General Hospital, the visiting committee reported that on April 16th the junior house surgeon, Dr. Triado, tendered his resignation, and in lieu of the usual two months' notice, arranged with Dr. G. A. Webster to act as his locum tenens. During the month, 190 in-patients have been treated at the hospital; discharged, 104; died, 7; leaving 52 males and 27 females under treatment on the 1st inst. The daily average number of occupied beds was 87, as compared with 98 last year, 97 in April, 1902, and 77 in 1901. It was decided to call for applications for the position of junior house surgeon, the remuneration being £175, with partly furnished quarters, fuel and light. A letter from the Public Health Department asking for the names of nurses at the Hospital who would be willing to act in cases of dangerous, infectious diseases, was referred to the medical committee, with power to act, as was also correspondence from the house surgeon relative to providing separate accommodation for phthisical and tuberculous patients.

Queen Victoria Memorial Infectious Diseases Hospital, Melbourne.—An inspection of the Queen Victoria Memorial Infectious Diseases Hospital buildings was made recently by the committee of management, with a view to arranging for the furnishing and equipment of the establishment. £750 is in hand for this purpose, but this amount will go a very short distance towards meeting even the immediate needs of the institution. The question of subdividing the two existing wards so that each might provide accommodation for patients of both sexes suffering from the same ailment, thus permitting of the treatment of sufferers from at least two kinds of infectious diseases, instead of only one, was generally discussed, the feeling being that the difficulties in the way were not insuperable.

Women's Hospital, Melbourne.—The new operating theatre at the Women's Hospital was opened last month by Lady Talbot. After an inspection of the theatre and a brief survey of the hospital, an adjournment was made to the nurses' dining-room, where the opening ceremony took place. Sir Malcolm McEacharn gave a brief summary of the means by which the necessary building fund had been raised; £300 had been the result of a garden fête held at Queen's Park, Moonee Ponds; a concert organised by Mr. Lambert had brought in £200, while Mr. and Mrs. Felstead, by means of a garden party at Brighton, had raised a very considerable sum. Lady Talbot then declared the theatre open, expressing the hope that many women would benefit by it. A vote of thanks to contributors to the building fund was tendered.

Ipswich Hospital, Queensland.—At the fortnightly meeting of the Board of Management of the Ipswich Hospital held on June 2nd, Dr. Thornton reported that there were in the hospital on the 18th ultimo 32 males, 19 females; since admitted, 12 males, 14 females; discharged since, 12 males, 4 females; died, 4 males 2 females; remaining 1st inst., 28 males, 15 females. The president reported that Councillor C. C. Cameron, president of the Joint Hospital Board, and Alderman Real, one of the members of that body, had waited upon him with a view to reopening negotiations with a view to the treatment by this hospital of scarlet fever patients. It had been pointed out by them that the present mode of treatment was unsatisfactory, and entailed heavy expenses upon the community. A discussion followed, there being a general feeling on the part of the board that if possible they would assist the joint board, and eventually it was decided that it be an instruction to the finance committee to draw up some basis of negotiation, and to report at the next meeting.

Pharmaceutical Preparations.

WE have received from Messrs. Burroughs, Welloome and Co. samples of the following new preparations:—

"TABLOID" ZINC VALERIANATE, gr. 2.—Zinc Valerianate made up into pills in the ordinary way is liable to become hard, and the volatile constituent usually permeates the coating and renders the pill distasteful to the patient. "Tabloid" Zinc Valerianate is specially prepared with the view of obviating these objections so far as possible. Each product is protected by a coating of sugur.

"TABLOID" BUTYL-CHLORAL HYDRATE AND GELSEMINE.—The combined action of butyl-chloral hydrate and gelsemine often relieves acute neuralgia of the fifth nerve, and a "tabloid" product is now issued which provides a convenient means of securing the desired therapeutic effect. The formula is: Butyl-chloral hydrate, gr. 3; gelsemine hydrochloride, gr. 1-200. As gelsemine hydrochloride is an extremely powerful drug, extreme care is needed in the administration of this preparation.

"TABLOID" TRI-BROMIDES EFFERVESCENT.—Formula: Potassium bromide, 0.4 gramme; sodium bromide, 0.4 gramme; ammonium bromide, 0.2 gramme; effervescent basis, q.s. The administration of a combination of bromides is considered by some physicians to produce more satisfactory effects than an equivalent dose of a single bromide salt. These tabloids will be found to be a convenient preparation when it is desired to prescribe the three bromides in conjunction with an effervescent basis. Each tabloid contains approximately 15 grains of the mixed bromides.

"TABLOID" ANTIFEBRIN COMPOUND.—The formula for this preparation is as follows: Antifebrin (acetanilide), gr. 2; caffeine citrate, gr. 1; camphor monobromide, gr. 1. This combination has been found useful in various forms of headache, in neuralgia, acute rheumatism, and other painful affections. It has also been prescribed with advantage in obstinate cases of vomiting following operations and in sea-sickness. It may be prescribed in any of the cases in which acetanilide is indicated.

"KEPLER" MALT EXTRACT WITH HÆMOGLOBIN.—The direct administration of hæmoglobin has been followed by such favourable results that this method of treatment has become established. As a blood former, hæmoglobin has been proved to be extremely efficacious. Containing as it does iron in organic combination precisely as it exists in the body, its assimilation is rapidly followed by definite improvement in health and strength. "Kepler" malt extract with hæmoglobin is efficient, stable and palatable, and possesses several advantages. In this preparation hæmoglobin is presented in a condition which ensures its immediate assimilation without disturbance of the digestive functions. The value of "Kepler" malt extract is unquestionable, and this concentrated nutrient, combined with hæmoglobin, forms an admirable preparation for administration in anæmia, chlorosis, general debility, wasting diseases generally, and also in convalescence after illness.

THE APOLLINARIS WATER.—The *Lancet* in a recent issue published an article pointing out that "the effects of the salts in natural mineral waters are such as cannot be obtained from any artificial imitation of them," and insisting on the superiority of natural mineral waters as compared with those artificially prepared. The suggestion is also thrown out that "radio-action," the presence of which has been demonstrated in certain natural mineral springs, may have some influence in determining their effects, over and above what may be inferred from their chemical composition. "Whatever may be the correct explanation," says the *Lancet*, "the fact that natural mineral waters act more favourably than do the artificial preparations is of decided importance, and the discovery of a means of differentiating the one from the other would be a gain to medical science." Apollinaris water was first introduced to the British public at the suggestion of very eminent medical authorities who were always deeply interested in all matters relating to the public health. The superiority of this natural mineral water over all others of the same type was speedily recognised, and its popularity, and consequently its consumption, grew by leaps and bounds, until the enormous amount of 30 million bottles represents the present yearly consumption.

FAULDING'S MILK EMULSION.—We have received from Messrs. Faulding & Co. a sample of their milk emulsion, which is an emulsion of the finest codliver oil in combination with the hypophosphites of lime and soda. It is a very fine emulsion and keeps well. A

well-known practitioner writes to us as follows:— "Faulding's Milk Emulsion is a preparation which I can strongly recommend. I have been using it now for some time, and I know of no preparation its equal for tubercular and other conditions of impaired nutrition. It is specially suitable for children. You only need to try it to appreciate its value as a food remedy."

MEDICAL NOTES.

The Plague in India.—Indian Plague Statistics.—The External Affairs Department has received statistics of the plague in India for the year ending April, 1904. The cases numbered 1,232,418, and the deaths 946,410.

Hospitals, and Undertakers' Signs.—At a recent meeting of the Camperdown Council, the Mayor drew attention to two objectionable undertakers' signboards which were exhibited in front of the Royal Prince Alfred Hospital. It was, he said, quite enough for the inmates of the institution and their friends to suffer without having undertakers' notices, in blazing letters, before them. The council passed a resolution that, in the opinion of the aldermen, the practice was undesirable, and should be discontinued. It was agreed to ask for the co-operation of the board of management to discountenance such procedure.

Brisbane Hospitals Village Fair.—The receipts at the hospitals village fair for four days amounted to about £2280, which, with the Government endowment, will total £5700.

Hospital Saturday Fund, Sydney.—At a meeting of the board of directors of the Hospital Saturday Fund held on May 30th, the executive committee reported that the total collection for the year now ending amounted to £4876 5s 11d, being an increase of £265 8s 10d over that of 1903. It was resolved to transfer the sum of £4450 from the Bank of New South Wales to Savings Bank at interest for two months. Applications were received from 27 institutions asking to be included in the distribution this year, and a special meeting of the board was held on Monday, June 13th, to consider all applications. It was resolved to distribute the sum of £4400 this year.

New South Wales State Children Relief Board.—At the last monthly meeting of the State Children Relief Board, the boarding-out officer's report showed that at the present time 3796 children were under the control of the board. Of these, 1217 are apprenticed, 133 are adopted, 181 are in cottage homes, and 2156 are paid for as boarders. Since the previous meeting of the board the sum of £305 12s 8d has been collected from contributing parents, and paid into the consolidated revenue. Forty-one applications for the restoration of children to their relatives were dealt with, 34 being approved, and seven refused. Two hundred and ten applications for the custody of State children were received, 53 being refused, and 157 granted.

Sydney Water Supply.—A minute written by Dr. Kendall, medical adviser to the Sydney Water and Sewerage Board, dealing with analyses of water for April, states that the quality of the water supplied was extremely good, and taking .05 parts of the combined ammonia per million as the highest standard of purity, the analyses showed that a very potable water had been supplied. Expressed in terms of combined ammonia, the sample from Crown-street was 60.4 per cent. better than during the previous month; from Basin Head at Prospect, 40 per cent. better; and from North Sydney, Potts Hill, and Prospect inlet, 23.2 per cent. better. The samples from Hurstville, Liverpool and Camden exhibited no deviation from their usual high state of purity, and the various other samples showed only a small shade of impure difference from samples analysed during March.

Anti-Vaccinationists in Melbourne.—The South Melbourne magistrates have imposed the maximum penalty of £2 on parents with "conscientious objections" to compulsory vaccination. In reply to some objections, the chairman said he was there to carry out the law as it stood, and, in his opinion, the fine for non-compliance with the vaccination law was far too low. Personally, he would make it five times as much. Another of the magistrates sympathetically concurred in these remarks. In the South Melbourne Court there is said to be now practically unanimity amongst the magistrates before whom vaccination cases are brought to impose the maximum penalty in all cases.

A Hospital Scandal.—According to a telegram in the *Sydney Morning Herald* of June 8th, as a result of an inquiry in connection with the expulsion of a patient from the Perth Public Hospital, the Board of Management has recommended that Dr. Camm, house physician at the hospital, be removed from his position, and the Colonial Secretary is reported to have endorsed the recommendation.

The third annual meeting of the Sydney Metropolitan Medical Association was held at the A B C Café on May 5th, 1904. The following were elected as office-bearers for the coming year:—President, Dr. Taylor Young; vice-presidents, Drs. Maitland and Palmer; secretary, Dr. Gledden; treasurer, Dr. John Harris; committee, Drs. Spencer, Fairfax, Hankins, Sydney Jones, junior, and West.

According to the Melbourne *Age*, the difficulties that honorary surgeons of the Melbourne Hospital have had to contend with in maintaining a suitable temperature in the Bowen operating theatre and keeping on hand a supply of sterilised water have been overcome by the installation of an ingenious apparatus constructed to the plans of Mr. B. T. Taylor, hospital engineer. Mr. Taylor, by combining heating and sterilising, has produced an appliance that reduces the cost to about one-half the sum that has heretofore been expended for the same purpose, and gives absolute sterilisation. The apparatus, which occupies a small corner in the basement of the building, heats the operating theatre through the medium of six radiators and produces 200 gallons per day of water sterilised at a temperature of 290°, and also heats water for baths, etc., at the rate of 270 gallons per hour.

Doctors give away more than any other class of men on earth. It is stated that gratuitous services of John Seccars last year to one large Philadelphia hospital amounted to over $500,000 at ordinary fees. Upon this the Wisconsin *Medical Record* remarks that "if any individual or any society had given a half million dollars to any cause the fact would have appeared in all the dailies with large headlines; but this free work of physicians has come to be considered as too common for notice. And this is only one hospital in the city. How enormous this free work in the whole country must have been last year!" Much of this free work was necessary and commendable, and much of it was not.—*The Medical Times*, March, 1904.

PERSONAL ITEMS.

The Government of Queensland has agreed to the withdrawal by Dr. Ham of the resignation of his position as Commissioner of Health.

Dr. J. B. Cleland, late resident pathologist at Prince Alfred Hospital, has obtained the diploma of the London School of Tropical Medicine, with distinction. He is expected to return to Sydney about the end of August.

The Melbourne Benevolent Asylum committee has decided to try the experiment of having a visiting in place of a resident medical officer, and has appointed Dr. Herlitz, recently resident medical officer of the midwifery department of the Women's Hospital, Melbourne, to that post. Dr. Herlitz will also act as dispenser.

Professor Anderson Stuart, M.D., LL.D., chairman of directors of the Royal Prince Alfred Hospital, returned to Sydney on June 18th from his visit to England and America.

Dr. Ashburton Thompson, President of the New South Wales Board of Health, has been re-elected by the Government to represent this State at the conference of Inter-State Health Authorities to discuss the subject of uniform quarantine regulations throughout the Commonwealth.

The Chief Health Officer of Tasmania, Dr. Elkington, has been selected as representative of Tasmania at the conference of experts to be held under the auspices of the Federal Government, for advising upon the proposed Federal Quarantine Bill.

Dr. O'Brien has resigned his appointment as assistant medical officer in the Department of Public Health, Queensland, and will practise at Cairns.

Dr. E. J. Jenkins, of Sydney, has been elected a Fellow of the Royal College of Physicians of London.

Dr. Gerald S. Samuelson has removed from Armidale, New South Wales, to Bangalow, Richmond River, New South Wales.

Dr. J. Murray Sanderson has removed from Broadwater to Ballina, Richmond River, New South Wales.

Dr. Frederick Chapple has started his duties as medical superintendent of the Adelaide Hospital.

Dr. Bronte Smeaton, late superintendent of the Adelaide Hospital, has started practice at Mount Barker.

Dr. Edward Moule, late of Mannum, has taken Dr. Barrett Hine's practice at Nairne. Dr. Hine intends to visit England.

Dr. Formby has started practice at Strathalbyn· Dr. Shone, who disposed of the practice, intends to settle in New Zealand.

Dr. Thomas Lane, late of Inverell, N.S.W., has commenced practice at Wycombe Road, Neutral Bay, Sydney.

Dr. J. Froude Flashman, director of the pathological laboratory of the Lunacy Department, returned to Sydney by the German mail steamer "Weimar" on May 16th, after an extensive tour of Europe and Great Britain.

At a recent meeting of the Launceston (Tas.) Hospital Board, Dr. Ramsay was welcomed on his return from a trip to Europe and America, and a tribute was also paid Dr. W. B. Heyward for the valuable service he had rendered the hospital during the last 18 months, when he acted as superintendent to the institution.

Dr. Triado has resigned the position of junior house surgeon to the Hobart Hospital.

Dr. Ramsay Smith, chairman of the Adelaide Central Board of Health, has been appointed a representative of South Australia at the suggested conference of experts to consider the necessity of establishing Federal quarantine.

Dr. I. S. C. Elkington has been appointed to the Commission of the Peace for Tasmania.

Dr. Samuel T. Knaggs, arrived from Kobé, Japan, by the "Empire," at Sydney on June 3rd.

Dr. A. E. J. Russell, who is making a prolonged holiday, has resigned his position as officer of health for Unley, S.A. Dr. D. T. Harbison has taken over his practice, and has been appointed as his successor in the office of M.O.H.

Dr. H. F. Cook has resigned his position as a public vaccinator.

Dr. A. E. Barratt-Hine has resigned his position as a member of the Board of Advice for the School District of Narne.

Dr. William Collins, of Wellington, N.Z., has been appointed a member of the University Senate, to fill the vacancy caused by the death of Dr. Morice.

Dr. Will, of Abbotsford, who has completed 20 years' service as surgeon-major to the Dunedin Engineers, has been awarded the Colonial Auxiliary Forces Officers' Decoration.

Dr. T. G. McKellar, of Dunedin, is at present absent on a two months' holiday to Sydney. Dr. E. J. O'Neill is looking after his practice.

Dr. R. E. Shuter has removed from Camperdown, Victoria, and has succeeded to Dr. Haynes' practice, at Beechworth, Victoria.

Dr. A. C. Macarthur, who has recently arrived from Scotland, has started practice in Grafton, N.S.W.

MEDICAL APPOINTMENTS.

NEW SOUTH WALES.

Armstrong, George, M.B. (Melb.), to be Assistant Honorary Medical Officer, Women's Hospital, Crown-street, Sydney.

Bell, H. C. Rikard, M.B. (Syd.), to be Visiting Surgeon to the Gaol at Wilcannia, *vice* Dr. Robert Dey, resigned.

Dey, Robert, M.B. (Syd.), to be Visiting Surgeon to the Gaol at Bourke, *vice* Dr. C. H. Scott, resigned.

Lees, Geoffrey John, M.B (Syd.), to be Government Medical Officer and Vaccinator at Adelong, *vice* Dr. W. M. Lyttleton, resigned.

Vallèe, Louis, L.R.C.P. (Edin.), L.R.C.S. (Edin.), to be Government Medical Officer and Vaccinator at Inverell, *vice* Dr. Thomas Lane, resigned.

VICTORIA.

Shuter, R.E., M.D., to be Public Vaccinator and Surgeon to the Ovens District Hospital and Gaol, *vice* A. Haynes, L.M.R.C.P. *et* S., resigned.

SOUTH AUSTRALIA.

Brown, Thomas William, M.B., B.S., of Hummocky Hill, to be a Public Vaccinator.

Fulton, Thomas Kensington James, L.R.C.P. and S., to be Medical Officer at Palmerston, *vice* Frederick Goldsmith, M.B. and B S., resigned.

Harbison, William Henry, L.R.C.P. and S., to be Medical Officer at the Wallaroo Hospital, *vice* Dr. T. K. J. Fulton, transferred to Palmerston.

Harbison, D.T., to be Medical Officer of Health for the Municipality of Unley, *vice* Dr. C. E. H. Russell, resigned.

Romeo, Guiseppe, to be Acting Medical Officer of the Palmerston Gaol.

QUEENSLAND.

Corfe, A. J., M.B. (Syd.), to be Acting Health and Medical Officer at Bowen, Queensland.

Gibson, A. Horace, M.B., Ch.B. (Melb.), to be Resident Medical Officer at the Brisbane Hospital.

Kuipers. Johannes Cornelius, M.D. (Univ., Jena), to be Medical Officer at Thornborough.

Sproule, Robert, M.B., B S., to be Health Officer and Medical Officer at Normanton.

Turner, Alfred Jefferis, M.B., M D. (Lond.), to be Acting Visiting Medical Officer of the Diamantina Hospital for Chronic Diseases, during the absence of F. W. E. Hare, M.B., M.D. (Durh.)

WEST AUSTRALIA.

Hungerford. L. M., L.M.R.C.S.I., to be Acting Officer of Health during the illness of Dr. V. Black.

Webster, Alfred, to be Acting District Medical Officer and Public Vaccinator at Coolgardie during the absence of Mr. W. P. Seed.

The following gentlemen to be Public Vaccinators for the districts set opposite their names respectively, viz.:—

Corley, Anthony, Southern Cross, during the absence on leave of E. S. Humphry.

Macqueen, Archibald John, Laverton.

TASMANIA.

Payne, J. W., M.R.C.S., L.S.A., to be Port Officer of Health for Devonport.

Roberts, E. J., M.B., to be Bacteriologist to the Department of Public Health.

NEW ZEALAND.

Mirams, Gilbert, has been appointed temporarily to the position of Assistant Resident Medical Officer at Seacliffe Asylum.

The following gentlemen to be Public Vaccinators for the districts set opposite their names respectively, viz.:—

Bennett. James Freeborn, M.B., B.Ch. (Glasg.), New Plymouth.
Deck, Henry O'Brien, M.B., B.Ch. (Melb.), Motueka.
Fox, Walter. M.B., Ch.M. (Glasg.). Christchurch.
Orchard, Albert John, M.B., Ch.M. (Edin.), 1896, Christchurch.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

The following persons have been duly registered as legally qualified medical practitioners in their respective States:—

NEW SOUTH WALES.

Bishop, Albert Edward Kemp, M.B., Ch.B. (Melb.), 1904.
Goldsmith, Frederick, M.B., Ch B. (Adel.), 188 .
Jamieson, Stanley Connebee, M.B. (Melb.), 1894; Ch.B. (Melb.), 1895.

WEST AUSTRALIA.

Anderson, Cauldwell Hamilton, L.R.C.P. (Lond.), M.R.C.S. (Eng). 1902.
Brownless, Anthony Colling, M.B., B.S. (Melb.), 1881.
Corley, Anthony Hagarty, M.B., Ch.B. (Dub.), 1902; M.D. (Dub.), 1902.
Douglas, John Campbell, L.R.C.P., L.R.C.S. (Edin.), 1900; L.F.P and S. (Glasg.), 1900.
Joyce, Caleb, M.B (Melb.), 1890.
Robertson, Alexander, M.B., Ch.M. (Glasg.), 1896.
Sproule. William, M.B., M.S. (Edin.), 1892; M.D (Edin.), 1895.
Webster, Alfred, M.B., Ch.M. (Glasg.), 1893; M.D. (Glasg.), 1898.

QUEENSLAND.

Clarkson, Frederick, M.B., B.S. (Durh.), 1901.
Corfe, Anstruther John, M.B. (Syd.), 1903.
Cock, Lawrence William, L.R.C.P.S. (Edin.), L.F.P.S. (Glasg.), 1899.
Kirke, Alice (*née* Miles), L.R.C.P.S. (Edin.; L.F.P.S. (Glasg.), 1900.

SOUTH AUSTRALIA.

Bradford, Anthony Bourchier. M.B., B.S. (Durh.), 1902; M.R.C.S. (Eng.), L.R.C.P. (Lond.), 1902.
Lamb, William, M.B., Ch.M. (Edin.), 1875.

BIRTHS, MARRIAGE AND DEATH.

BIRTHS.

LAWRENCE.—On the 22nd May, at 82 Collins-street, Melbourne, the wife of Herman Lawrence, M.R.C.P.E.—a daughter.

RUSSELL.—On the 7th May, at "Roma," Aldgate, S.A., the wife of A. E. J. Russell, M.B., Ch.B.—a daughter.

MARRIAGE.

KELLY—WOODLEY.—On the 24th May, at Kempock, Sandgate, Queensland, by the Rev. W. Poole, William Ryton Kelly, M.B., B.S., son of the Rev. R. Kelly, Melbourne, to Stella May, daughter of Mr. and Mrs. J. L. Woodley.

DEATH.

ELLIOTT.—On the 7th May, at Geraldton, W.A., Chas. B. Elliott, M.R.C.S. (Eng.), L.R.C.P. (Edin.), aged 53 years.

BOOKS RECEIVED.

Medical Laboratory Methods and Tests. By Herbert French, M D. (Oxon.), M.R.C.P. (Lond.). London: Baillière, Tindall & Cox. Sydney: L. Bruck. 1904. Price, 3s 6d net.

Contributions to Practical Medicine. By Sir James Sawyer, M.D. (Lond.). F.R.C.P., Senior Consulting Physician to the Queen's Hospital, Birmingham. Birmingham: Cornish Brothers. 1904.

Twenty-eighth Annual Report of the New York State Reformatory at Elmira. President, Chas. F. Howard, M.D.

Patent Foods and Patent Medicines. Two lectures delivered by Robert Hutchison, M.D., F.R.C.P. London: John Bale, Sons & Danielson, Ltd., Great Litchfield-street W. Price, 1s net.

Orthmann's Handbook of Gynæcological Pathology for Practioners and Students. Translated by C. H. Roberts, M.D. (Lond.), F.R.C.S., M.R.C.P., and Max L. Trechmann, F.R.C.S., M.B , C.M. London: J. Bale & Sons, Limited. 1904. Price, 5s net.

The Calendar. The Royal University of Ireland for 1904.

Lectures on Clinical Psychiatry. By Emil Kraepalin. Professor of Psychiatry, University of Munich. Revised and edited by Thos. Johnstone, M.D. (Edin.), M.R.C.P. (Lond.). London: Baillière, Tindall & Cox. Sydney: L. Bruck. Price, 10s 6d net.

Obstetrics for Nurses. By Joseph B. De Lee, M.D., Professor of Obstetrics, North-Western University Medical School. Fully illustrated. Philadelphia: W. B. Saunders & Co Melbourne: Jas. Little. Price, 12s 6d.

A Text-Book of Legal Medicine and Toxicology. Edited by Frederick Peterson, M.D., and W. S. Haines. M.D. Vol. ii. Philadelphia: W. B. Saunders & Co. Melbourne: Jas. Little. Price, per part, 25s.

The International Text-Book of Surgery. By American and British authors. Edited by J. C. Warren, M D., L.L.D., Hon. F.R.C.S. (Eng.), and A. Pearce Gould, M.S., F.R.C.S. Second edition, thoroughly revised. Vol. i.: General and Operative Surgery. Vol. ii.: Regional Surgery Philadelphia, New York and London: W. B. Saunders & Co. Melbourne: Jas. Little. 1904. Price, per part, 25s.

The American Year-Book of Medicine and Surgery for 1903. Edited by G. M. Gould, M.D. Two vols. Philadelphia, New York and London: W. B. Saunders & Co. Melbourne: Jas. Little. 1904. Price, per part, 15s.

The Treatment of Fractures. By Chas. Locke Scudder, M.D. Fourth edition. Revised. Philadelphia, New York and London: W. B. Saunders & Co. Melbourne: Jas. Little. Price, 25s.

Modern Materia Medica and Therapeutics. By A. A. Stevens, M.D. Third edition, revised. Philadelphia, New York and London: W. B. Saunders & Co. Melbourne: Jas. Little. Price. 14s 6d.

Saunders' Medical Hand Atlases.

Atlas and Epitome of Operative Gynæcology. By Dr. Oskar Schaeffer. Edited by J. C. Webster, M.D. (Edin.), F.R.C.P.E., F.R.S.E. Philadelphia, New York, and London: W. B. Saunders & Co. Melbourne: Jas. Little. Price, 15s.

LETTERS AND OTHER COMMUNICATIONS RECEIVED FROM CORRESPONDENTS:—

Dr. W. L. Cleland, Parkside, South Australia; Dr. H. W. Bryant, Williamstown, Victoria; Dr. H. C. Hinder, Sydney; Mr. G. H. Taylor, Hobart; Mr. F. W. Webb, Manly; Dr. A. Watson Munro, Sydney; Dr. R. Worrall, Sydney; Dr. C. Reissmann, Adelaide; Dr. B. Poulton, Adelaide; Dr. W. G. Armstrong, Sydney; Dr. B. B. Ham, Brisbane; Dr. T. B. Gunson, Adelaide; Dr. Hawthorne, Mudgee; Dr. Vallack, Bowral; Dr. Shuter, Beechworth, Victoria; Dr. J. A. Cameron, Ipswich, Q.

PRESIDENTIAL ADDRESS.

Delivered at the annual meeting of the South Australian Branch of the British Medical Association.

By Melville Jay, M.R.C.S., L.R.C.P. (Adel.), Retiring President.

The time has arrived for me to vacate the position of President of the South Australian Branch of the British Medical Association. In doing so, allow me to thank you most heartily for the cordial and loyal support you have all given me throughout my term of office; it is pleasing to remember our meetings have all been of so harmonious a character, and that we can look back upon a really satisfactory and successful year's work. I have been interested in making a comparison of the work done by this Society and that of other Branches numerically as large as ours, and I find that the amount and character of work done, the cases of interest shown, the papers read, etc., compare most favourably for our Society in originality, rarity, and, most of all, in the records of successful surgical operations, a large majority of which would not have been attempted a few years ago.

The leading article in the *Register* of February 6th of this year on "Surgery: Past and Present," says: "Up to the present time Australia has not produced a man who has left the stamp of his personality upon his art; and the only department of surgery in which local practitioners can be said to have really made independent advance is in the treatment of hydatids." This is no doubt true to a certain extent; we have not yet developed a Lister or a Pasteur, but we must not forget that we do not possess institutions such as the Pasteur Institute, the Royal Institution in London, or the Continental and American Universities, where the supply of money is practicully unlimited, and the Professors have time and material in abundance, and of the best, to prosecute original experiments and research. In a comparatively young country, such as Australia is, the physician must be, to a very great extent, influenced by regard to his own interest, which necessarily places him in a false position in the public eye, by the fact that he has to find his means of livelihood in the sufferings of his fellow men; and in only a few instances is he able to devote himself to original work on any special subject, and even then there must necessarily be, comparatively speaking, a lack of material.

On the whole, I think we can safely say that the medical men of Australasia keep fairly well abreast of the times, making use of remedies and new lines of medical treatment, which have passed through the experimental stages in the older countries, and have proved successful, without any reference to the country they emanate from, or even to the fact that the remedy is not included in any of the recognised pharmacopœias. I agree with the writer of the aforementioned article where he says that a typical Australian surgeon combines a good deal of Yankee "smartness" with traditional British caution, and from a surgical standpoint this combination should produce a very successful result. A medical man in Capetown, during the recent discussion concerning a medical congress to be held there, spoke very disparagingly of the Australian manufactured surgeon, but we have only to look to facts in making comparison between the colonial and home-made article to see that the former can, and always will, hold his own. Students who have qualified in Australia invariably do well on continuing their studies in England or on the Continent, and rarely fail in gaining the highest qualifications. Anyone who has looked into the matter sees at once that the Australian student has far more practical knowledge than his *confrère* of similar standing in an English hospital, though, perhaps, he is not so crammed with theories. The outcome of this is that the Australian qualified man feels himself competent to undertake private practice without undergoing any preliminary assistantship. And we often find him undertaking operations of great magnitude in the early part of his career, which an English surgeon would scarcely think of attempting until he had had several years' experience. I need hardly say that I am not an advocate of this latter condition of things, but merely mention it to show that our Capetown correspondent was wrong in his estimation of the Australian-made doctor, who, as a rule, only poses as a general practitioner, knowing something of everything in his profession, and not as a specialist, who is supposed to know everything of something.

In the annual addresses of past years it has been the custom either to read an address upon some special subject or to glance over any important or interesting events of the preceding year, and to comment generally upon the various improvements and discoveries in the branches of medicine and surgery.

Together with many of you here present I have had the privilege of witnessing and taking part in what we may call a complete revolution in almost every branch of medical and surgical work; so marked have these changes been during the last 30 years that this period must always stand out as an important one in the annals of our art.

I commenced my work in the Adelaide Hospital 30 years ago, and it seems scarcely possible to realise the state of affairs that existed at that time, when such diseases as pyæmia, septicæmia, erysipelas, hospital gangrene, etc., were of daily occurrence, when all operations, however slight in character, were attended with the gravest risk, complications of the most serious character arising without any knowledge of the why or wherefore, dread of secondary hæmorrhage, and so-called shock, the most commonly assigned cause of death, which now would be looked upon as a confession of ignorance. The birth and growth of bacteriology, followed by the perfected system of antiseptic and aseptic surgery, have put an end to all this. I should be going over too well-known ground if I were to attempt to record the advances in surgery and medicine made during the past 30 years; but, if you will permit me, I should like to draw attention to some of the methods in vogue in the Adelaide Hospital in the early seventies, so that by comparison one can see the enormous strides that have been made in these sciences, and prove by practical results the marvellous improvements in the lines of treatment adopted at the present day. Most drugs were prepared in the crudest fashion, made up in the form of tinctures, infusions, decoctions, etc., and were mixed in the most indiscriminate manner. I have a prescription of one of the leading medical men of that time of a pill containing over 20 different extracts, apparently one for each symptom of the patient. Nearly all the prescribing in the hospital consisted of some half-dozen stock combinations, their virtues being mainly dependent on their nastiness; a tasteless medicine would have been considered worse than useless—by the patient, at any rate.

There was no special preparation of ligatures; these were always of silk, which may have been lying exposed for weeks, and were often handed to the surgeon by the post-mortem attendant; very little care was taken in cleansing the surgeon's hands, and practically none in cleaning the patient's skin. Instruments were roughly washed, and the sponges, which were probably the most prolific source of infection, were only cleansed in the most superficial manner. The surgeon almost invariably wore a frockcoat, and the thicker the blood stain on it the greater his pride in it. Ligatures were not cut off short as at present, but one end was left attached to each vessel hanging out of one corner of the wound, and it was the duty of the house surgeon to pull upon these separately each morning while dressing the wound until it separated, and it was always considered an important matter to learn how much force ought to be applied to hasten the loosening of the ligature without setting up secondary hæmorrhage. I have seen a ligature attached to the femoral artery in an amputation of the thigh remain hanging from the stump for three weeks before separating. All kinds of so-called healing ointments, oils, lotions, etc., were applied to wounds, but no form of drainage was made use of.

No prophylactic measures were attempted; children were all supposed to run through a course of scarlatina, measles, whooping cough, etc., as a necessary part of their existence. Infectious cases, such as diphtheria, scarlatina, puerperal fever, etc., were all allowed in one ward, and the only cases I can remember to undergo isolation, and that in a tent only, were very severe cases of syphilitic eruptive disease of too filthy a nature to mix with other patients, presenting a more virulent type than is met with now, probably from improper and imperfect treatment.

The practice in hydatids of the liver, which were practically the only ones recognised at that time, was to aspirate. If the cyst refilled frequently or its contents suppurated, in those cases where the tumour was in close contact with the abdominal wall—other cases were wisely left alone—some powerful caustic was applied, sufficient to cause the skin to ulcerate, and to set up adhesions to the hydatid cyst which was then opened, and one or more soft catheters introduced, no attempt being made to remove the mother cyst, which sometimes took weeks to come away. Cases of hydatid of the lung were never operated on, though I remember several cases coughing up portions of cysts, etc ; when there was any pulmonary hæmorhage the case was invariably put down as one of phthisis, and pronounced incurable I am speaking now of the time prior to Dr Thomas' well-known investigations and improvements in the treatment of hydatids.

For the reduction of dislocations there was a complicated system of pulleys arranged on the floor of the theatre, powerful enough to pull a limb off ; in 1873 the dislocated thumb of a powerful young Swede was almost torn from the hand in this way ; he developed tetanus, but under the prolonged use of chloroform and morphia, recovered.

Abdominal surgery in its widest sense has practically sprung into being and developed since the early seventies. The chief means of diagnosis in any abdominal tumour at that date was tapping, with the trocars of all shapes and sizes, and, if the contents of the tumour were fluid in character, the diagnosis and prognosis was usually arrived at from the macroscopic appearance of the fluid, and unless the tumour were freely movable and quite free from adhesions, operative interference was considered worse than useless. Several ovariotomies were performed at this time ; they all rapidly succumbed, and in most cases death was attributed to shock, though one can now see the cause of death was undoubtedly either sepsis or hæmorrhage. Cases of strangulated hernia were fairly common ; an occasional case recovered after operation, but the majority died, in most cases because operative interference had been unduly delayed. No effort was ever made to complete a radical cure of the hernia, the sole object being to remove the strangulation and replace the ruptured bowel.

Rheumatic fever, which I should say was more prevalent than now, was then treated almost wholly by alkalies, chiefly bicarbonate of potash ; the average duration of the disease was at least six weeks. Salicylic acid and its compounds were then brought forward, and the whole aspect of the disease underwent a change, patients being freed from their acute pains in a few days at the outside, though the heroic doses which are now given were not then indulged in.

The treatment of consumption resolved itself into the giving of manifold so-called specifics, cod-liver oil, etc., clothing the patient with the warmest of materials, dieting him carefully, keeping him out of the fresh air as much as possible, shutting him up in the closest of rooms, in order that he might run no fear of catching cold, and be out of the draught. The present line of treatment is practically the reverse of this, viz. : "All the fresh air possible, and as much food as can be forced down." There is no doubt about the uniformly ill results of the older methods of treatment, and I hope the result of the more recent methods may prove correspondingly the reverse.

Typhoid fever was treated with an absolute milk diet, until the evil effects of this was pointed out in a very able article by Sir William Jenner, who conclusively showed it was not as thought certain death to give any other food but milk in this disease, but that the milk diet alone was actually injurious. Typhoid occurred regularly at certain seasons of the year, until the deep drainage system was introduced ; the percentage of deaths was about 30 ; the milder cases were usually styled "low fever," and, if the stomach symptoms were in the ascendancy, it was called "gastric fever." Temperature charts were not kept, and the temperature was usually guessed at, as the clinical thermometer had not come into general use, at any rate outside the hospital.

Gynæcological work was comparatively in its infancy ; the passing of a sound was looked upon as a matter of considerable importance, and in many cases, with the appliances then in use, almost an impossibility ; the surgeon who would seize the cervix with a vulsellum and drag the uterus down was supposed to be doing incalculable damage ; dilatation, except by tents, and curettage were unheard of. Pessaries of every conceivable shape and material were in constant use to attempt to overcome the various uterine displacements ; these were usually named after the inventor. Of course such operations as hysterectomy and the many operations on the appendages, now so common and so successfully carried out, were rarely attempted. Inflammatory conditions were divided into perimetritis and parametritis, according to whether the peritoneum was involved or not, and were always treated by rest opiates and hot applications ; cases of ectopic gestation were rarely recognised, and were always allowed to die without the operative interference which now saves so many lives.

Appendicitis went by the name of typhlitis or perityphlitis, and was always allowed to run its own sweet course; most surgeons or physicians—there was practically no such distinctions at that time—relying on opium for treatment, others combining calomel with it in varying doses. It is a curious fact that post-mortem evidences did not more commonly call attention to the origin of this disease and also to the source of trouble in cases of ectopic gestation.

In diseases of the kidney and bladder most attention was paid to calculus of the latter organ, and surgeons then met with more success in their lateral lithotomies than with other operations of similar magnitude, the great feature of the operation being to carry it through with as great rapidity as possible. The surgeon who was unsuccessful in cutting into the bladder with one incision, and seizing the stone in his forceps with the first outrush of fluid, was considered to have bungled the operation. The suprapubic operation had at that time gone out of favour. The honorary surgeons of the Adelaide Hospital were, I remember, proud of the successful results of their lithotomies, which were much more numerous than at the present day. Surgery of the kidney was practically unknown, and I am afraid had the surgeons of that time listened to our recent discussion on nephropexy they would—as some of our present physicians did—think we were interfering too much, and endeavouring to fix and alter the position of internal organs in a most uncalled for manner.

Peritonitis, to which death was attributed in almost all abdominal cases, was divided into traumatic and idiopathic; the latter term would now mean a confession of ignorance as to the origin of the peritonitis. In the seventies, and even much later, the diagnosis of peritonitis was made with great satisfaction, being final and sufficient for all purposes. Who at the present time, with any pretence to scientific knowledge, would be content with a mere name giving no idea of the character or cause of the illness? We all now recognise the fact that peritonitis is an infection of a large serous sac, varying with the form of organism, streptococcus, pneumococcus, gonococcus, or bacterium coli, as well as the amount of toxin absorbed; but in those days we were entirely ignorant of such matters, and, in consequence, the surgery of the stomach and intestines was little understood. The most advanced operations were colotomies and an occasional gastrostomy. The surgeon who suggested making an opening into the abdomen for exploratory purposes, now done so frequently and without any fear of ill result, would have been considered to be taking a terrible risk.

In the seventies a patient suffering from carcinoma of the stomach was given up as hopeless, and it was not until 1881 that Billroth performed the first successful pylorectomy, and during the past year cases have been exhibited at our meetings who have successfully undergone this operation; and I heartily congratulate the surgeons whose cases they were, on their splendid results. The idea of uniting the stomach to a loop of bowel was then unthought of, but now gastro-enterostomies are becoming more and more common, and many lives are saved or prolonged by this procedure. So also with cases of gastric ulcer, where surgical interference, though only adopted during quite recent years, is showing excellent results, though previously this condition was considered to be suitable for medical treatment only, from first to last. How easy at the present time it would be to find in all our hospitals cases of cure of acute intestinal obstruction by division of adhesions, untwisting of volvulus, reduction of internal hernia, unfolding of intussusception, removal of growths and concretions, etc., all of which would almost certainly have died under the treatment adopted in the early seventies.

Chloroform was the anæsthetic always used, but in many cases operations were done without any anæsthetic, and I shall never forget seeing an unfortunate man have his arm amputated one day, and a few days after his eye enucleated without any attempt to lessen his sufferings. I think few of us would care to continue our surgical work under such conditions. In 1874, however, two unfortunate deaths took place within three weeks of one another during the administration of chloroform. The patients were both strong adults, one with a crushed finger and the other with necrosis of tibia; both died before the operation was commenced, and in each case only Dr. Gardner, who was administering the chloroform, my brother, who was operating, and myself were present. No cause for death could be found in either case, and it was decided that from that time no operation should be done except one or more honorary surgeons were present, and ether should be the anæsthetic used. I see they have passed similar regulations in the Melbourne Hospital, exactly 30 years after they had come into force in the Adelaide Hospital. I was instructed to make complete notes as to the action, results, etc., of ether, as compared with chloroform anæsthesia. This I did in the first 100 cases, where ether was administered in the Adelaide Hospital, and the results of my observations are contained in Dr. Thomas' pamphlet, " Ether *v.* Chloroform," which he published in 1875. I was also mainly instrumental in collecting his numerous data from all parts of the world. As you all know, the proofs in favour of ether were overwhelming ; and I can honestly say that after 30 years' experience, I have never personally met with a single serious result attributable to ether anæsthesia. I mention these facts for the following reason : At an inquest last year on a child who died at the Children's Hospital during the administration of chloroform, the city coroner, in his summing up, made the following remarks : " Ether is the safer for the doctors' reputation ; chloroform is the safer for the patients' life and well-being." He goes on to say: " In view of these facts, I venture to express the hope that the committee administering the affairs of this hospital will not make any regulation or recommendation regarding what anæsthetics are used by the staff, as some misguided hospital authorities and other people elsewhere show an inclination to do. Anything more pernicious in the way of hospital administration could scarcely be conceived, for it means, in plain terms, the adoption of a policy of saving the reputation of the hospital and the operator and the anæsthetist at the expense—I do not say risk—but actual expense of patients' sufferings and patients' lives. It means that so long as the death of one patient under chloroform on the operating table is avoided, then patients may suffer, or even die, from the direct effects of ether, if so be that they die in the wards, and thus avoid the publicity of a coroner's inquest. If a patient should die within a few days after an operation the operator seems to experience a feeling of relief if the post-mortem examination shows that death was due to the ether administered ; but I do not find that the coroner is informed, or that ether appears in the hospital returns as the cause of death." It is hardly necessary for me to contradict these statements to you professional men, who have had large and daily experience in these matters, and perhaps it would be wiser to pass them over in contemptuous silence ; but I think it my duty in my position here to publicly call attention to the facts, and not allow the easily intimidated lay mind to be led astray by remarks from a public officer, which ought never to have been made, and which, as pointed out by Dr. Swift at the time, are absolutely at variance with the experience of all those who have had much to do with anæsthetics. I suppose we cannot alter the fact that a certain number of people will always act up to the saying, " *Summis naribus olfacere* " ("to smell with the tip of the nose"), or, in other words, pass an opinion on a matter with only a slight knowledge of it.

It is hardly necessary for me further to enumerate the many operations and lines of treatment which were then either unheard of or only in their experimental stages ; and in order to understand the enormous advances made in both sciences of surgery and medicine during these 30 years, we have only to look at the new methods of preparing drugs, where the active principles only are used, and administered in the forms of tabloids, capsules, etc., hypodermic medication, serumtherapy, and the anti-toxins ; Röntgen ray and light treatments, electrical appliances of all kinds, diagnostic and therapeutic ; the many new methods of treatment, the marvellous operations carried to a successful issue, and the almost incredible statistics of specialists in their various lines.

The very marked decrease in the birth-rate of the various States is a matter of vital importance to the future of the Commonwealth. In New South Wales a Royal Commission was appointed to enquire into the causes, etc., of the diminished birth-rate, and a variety of so-called remedies were recommended ; but personally I am afraid all the legislation in the world will not put an end to women, either from poverty, selfishness, fear and dislike of motherhood, combined with the husband's dread of increasing his responsibilities in having to support and educate a large family, making use of any preventive measures they may be acquainted with. There is, unfortunately, no reason to doubt the fact of this arrested growth, and the

Commission gathered from the evidence of the medical men that the decrease was due undoubtedly to the fact that deliberate prevention had become exceedingly common, and also that measures for procuring abortion were being employed more and more frequently throughout the States. This latter evil can and must be legislated against, but experience—in this State especially—has shown how difficult it has been for the police to conduct their prosecutions of these cases to a successful issue. The Commission, after exhaustive enquiry, ascertained that in 15 years over 200,000 infants died in New South Wales, Victoria, Queensland, and South Australia; they also stated that 100,000 of these deaths could have been prevented. The Commission advocated, in order to reduce this terribly heavy mortality, that increased accommodation at the public hospitals be provided for the cure of sick infants; that all infants and foundling homes and other institutions undertaking the care of infants be made subject to Government regulation, supervision, and control; and further, that provision should be made that where young infants are placed in an institution which receives infants for care, the institution shall receive the mother as well as the infant.

Restrictive and educational legislation are all very well in theory, but if they alone are depended upon, and the birth-rate condition, in other words, the basis of national life, remain the same, in whatever light we may look at this matter, whether socially, morally, or economically, the future of the Commonwealth of Australia must necessarily be a gloomy one. We medical men are generally and very properly supposed to have more interest, knowledge, and experience in these matters than the ordinary legislator, and it behoves us to offer the benefit of our experiences to these States. Now, in place of all these legislating and educational theories, would not an ounce of practice be of much more ulterior benefit? Therefore I would recomment the Governments of the various States to turn their attention solely to the living infants as being of far more importance. Supposing they had done so in the past, as the Royal Commission has shown, 100,000 infants might have been saved in the last 15 years. Now the question arises, How is this best to be done? In addition to the plans of the Royal Commission, I would suggest following in the footsteps of many towns in France, of New York, and several other American cities, and later still of Battersea, in London. In these towns depots have been formed, under municipal control, which dispense modified or adapted milk of any desired proportions according to the age and digestive capabilities of the infants or the prescription of a physician. The milk, containing its proper proportions of carbohydrates, proteids, and fats corresponding to human milk, is sterilised, put up in stoppered bottles, also sterilised, sufficient for one meal only. The food thus prepared is sold to the customer, who takes a sufficient number of bottles to feed the child for one day, and the depot becomes, at any rate, partially self-supporting. Experience has shown that where this system is carried out, gastro-enteritis is practically unknown, and the infant death-rate is lowered to a marvellous extent.

I can only suggest that some member of our Parliament should take this matter up and render himself famous by establishing depots on the lines I have described, and I can promise him in years to come a well-earned and pleasing notoriety. Dr. Byrne, of Brisbane, in an article on infant mortality, has strongly recommended the adoption of these milk depots, and I believe our own Health Officer, Dr. Borthwick, has also given expression to similar views, which only require to be put into practical effect to eventually become of the greatest benefit to the Commonwealth. Of course the crux of the whole question lies in providing a supply of pure clean milk. As the milk trade is at present conducted, the sources of contamination are innumerable; for instance, carelessness and gross dirtiness at the dairies; negligence and want of cleanliness in transit; culpable manipulations and adulteration by the vendors; storage often in the most undesirable surroundings where contamination is most likely to take place—these matters are all under the control of the various local boards, and their sanitary inspectors in town and country especially should see that their orders are carried out, and a more thorough supervision made of the milk supply. Otherwise experience has shown even if humanised or better modified milk be supplied to infants, there is always a possibility of the infants developing scurvy and allied ailments, unless the milk supply be perfectly pure, fresh, and clean.

Probably the two subjects which have created the greatest interest in the medical world during the past year have been the treatment of consumption and cancer. With regard to the former, as President of this Branch, I was asked to propose the resolution for the formation of a branch in South Australia of the Society for the Prevention of Tuberculosis. I was surprised at the apathy of the public in this matter, seeing how large a percentage of the population is, or has been, directly or indirectly affected by this disease. At a subsequent meeting, excellent speeches were made by his Excellency the Governor, Dr. Verco, and others, and I have no doubt, as has been the case in other countries, satisfactory results will accrue from instructing the public in the measures they are to adopt to check the spread of this terrible scourge.

You are all no doubt heartily sick of the subject of the much-discussed site for the proposed treatment of advanced consumptives; it is, in any case, a move in the right direction, enabling the authorities to remove these cases from further contact with their susceptible relatives, and giving them an opportunity of thoroughly disinfecting their abodes. The chief causes of consumption, secondary, of course, to the presence of tubercle bacilli, are "respiration of exhausted air, defective drainage, with unsuitable and insufficient food." Our object should be to remove patients from these conditions and give more attention to early diagnosis, now made easy by ascertaining the presence of the characteristic bacilli, even though the physical symptoms are ill-defined, followed by active treatment while in the incipient stages. Prevention can be brought about by the removal of the patient from his infected surroundings, placing him under proper supervision and suitable hygienic conditions, the disinfection of his home, and the abolition of the spitting nuisance, combined with the vigilance of the administrators of the Public Health Acts. Cure can be effected when the patient is placed under constant medical supervision of the right kind, and at present the "open-air" sanatoria afford the best facilities for this. Time will not permit me to quote statistics from various parts of the world showing the excellent results of the "open-air" treatment; and although statistics, especially in a disease like consumption, can be made to prove almost anything, I think we can accept as an established fact that this form of treatment has proved more successful than any other previously tried. We have every reason to congratulate ourselves on the possession of sanatoria such as Kalyra and Nunyara, situated in the glorious climate of our hills, where accommodation and up-to-date treatment are provided for some 60 or 70 patients.

If the Government carry out the suggestions recently made by this Society, viz., "to treat the advanced cases of phthisis at the already prepared and suitable cottages on North Terrace, and convert Belair Retreat—the much appreciated gift of the late Mr. Angas—into a home for convalescent consumptives," we may consider that South Australia is well provided for the treatment of those cases for some years to come.

With regard to cancer, I regret to say that so little advance has been made in its etiology, pathology, and treatment that we still can only recommend the complete removal of the disease as soon as it is discovered. And we can safely say that, provided it is discovered early, and removed freely, we can, by surgery, undoubtedly cure a considerable proportion of cases, and give relief, and prolong life in many more. Dr. Herbert Snow, senior surgeon to the Cancer Hospital, in his recent address, adopted a very pessimistic tone concerning the results of recent research, and spoke of cancer as "the Darkest Africa of the map of medicine." Very large sums of money are now being applied to the thorough scientific enquiry into all cancer in all its aspects, especially with a view to find some line of treatment likely to be beneficial in this much dreaded disease. Day after day we read of wild theories being promulgated relating especially to articles of diet, and the public being frightened one week into taking too much salt, and the following week into taking none at all; and so on with beer, cider, tomatoes, etc. However, I think we can safely look forward to a time when these suffering from this hateful disease will no longer have to resort to surgical aid, but will place themselves in the hands of the physician, because I feel sure that ere long we shall have discovered the true cause of the disease, followed rapidly by the discovery of an anti-toxin or by some form of serumtherapy, by which we shall be enabled, not only to cure, but to prevent the disease. Quite recently Professor Doyen, of

Paris, in a communication to the French Academy of Sciences, stated that the injection of toxin produced by the "micrococcus neoformans"- a microbe formed in the growing edge of rapidly developing tumours—will arrest the growth of cancer and secure immunity from further advance; and he further states that out of 47 cases experimented on, 21 were completely cured. As the *British Medical Journal* remarks, his statements are certainly interesting, but before his claim to have discovered a cure for cancer can be accepted, the profession must have the fullest opportunity of forming an independent judgment on the facts, and his results must be confirmed by the experience of many other surgeons. It is impossible to forecast the future, but to my mind, though surgery, as applied to cases of cancer, will no doubt make still greater strides, and overcome many difficulties, ultimately—as I have remarked before—these cases will come under the care of the physician, pathologist, and bacteriologist, whose aim will be, not so much remedial as prophylactic, as nowadays it is considered a greater triumph from a scientific standpoint to prevent than to cure disease. We are constantly progressing, and as I have roughly pointed out to you, the methods, surgical and medical, in vogue in the Adelaide Hospital in the early seventies, which were considered sufficient in those days, would be regarded as totally inadequate to-day. We have not only overcome difficulties which appeared quite as insurmountable as the cure of cancer, but we have achieved a scientific attitude which will become more and more characteristic of our profession, and which will tend more to the advantage of the community at large than to the individual professional man. The tendency of the age is undoubtedly towards prophylaxis, or the prevention of disease; as medicine approximates more and more to the character of an exact science, its main effort will be towards prevention rather than cure; in this way the health of the community must necessarily improve, while the work of the professional man will decrease at a proportionate rate. Though the principle of serum therapy, so eminently successful in some diseases (diphtheria, tetanus, etc.), has not fulfilled its promises in other bacterial diseases, it is extremely probable that further investigations will enable us to treat with success all localised bacterial invasions, methods of immunisation, and protective inoculation will become more and more common.

It does not seem improbable that, in the near future, in all inflammation, whether of the abdomen and the viscera, the respiratory tracts and pleura, the brain and spinal cord and their membranes, the uterus and its appendages, or of the bones and joints, the physician and pathologist, by examination of the blood and secretions, will be able to ascertain the organism or organisms causing the infection, and then apply the appropriate serum or vaccine. If so, Cicero's remark, "*Medici, causa morbi curationem inventam putant*" ("Physicians think that the cause of the disease being discovered, they have also discovered its cure"), will become an absolute fact. We do not profess to be able to cure advanced organic diseases, such as Bright's disease, advanced tuberculosis, cirrhosis of liver, etc.; but as our scientific knowledge reaches a higher standard, our powers of observation become more and more acute by long practice and well-directed attention, our interpretation of symptoms more accurate, with a more exact appreciation of the finer shades, provided we have the assistance of the public in calling us in at the commencement of an illness, instead of, as is usual, when the disease is well advanced, and practically beyond our control, we shall then be in a position to apply our prophylactic measures with an almost certainty of success. In the future let us hope that "medicine" will be described, not as it always has been, "the art of curing disease," but as a science which "prevents all those diseases which it cannot entirely abolish," and in order to accomplish this, the medical man must become a hygienist quite as much as a physician or a surgeon.

In conclusion, I must thank you for giving me so patient a hearing. I trust that what I have said will tend to prove that we are one and all imbued with a desire to carry out our duties conscientiously. I gratefully thank the Council for their hearty co-operation in the year's work, and especially our most excellent secretary, Dr. Gunson, without whose assistance I should, indeed, have felt lost. I have now the pleasant duty of introducing Dr. C. Hamilton as President for the coming year, and I cannot do him better service than by asking you to show him the same amount of courtesy and consideration that you have always exhibited to me during my year of office.

ALEXANDER'S OPERATION ON THE ROUND LIGAMENTS OF THE UTERUS.

By W. J. Stewart McKay, M.B., M.Ch., B.Sc., Senior Surgeon, Lewisham Hospital for Women, Sydney.

I WISH to-night to demonstrate by a series of diagrams the operation of shortening the round ligaments of the uterus.

Some 10 years ago when this operation was discussed before this Association, I was not in favour of the operation. I had never performed it, and had to content myself with giving quotations from the writings of certain celebrated gynæcologists, such as Lawson Tait, Zweifel, Martin, Howard Kelly and others, who did not approve of the procedure. Having now performed the operation over 150 times, I readily come forward to say that in suitable cases this is one of the very best operations that the gynæcologist can perform. Furthermore, I hope to show you to-night, that while a few adhesions in the part would often absolutely prevent the operation, as performed by Alexander, from being a success, now, by new technique, adhesions need be no bar to one performing the operation.

I shall divide the operation into several steps.

Preparation of Patient and Skin.—The patient is prepared in the usual manner by purging, enemata, and fasting. Previous to this, however, a week in bed will often prove advantageous, so that she may have a course of glycerine plugs. The pubes are shaved on the evening preceding the operation; then the skin is washed with soap and spirit, and a pack of biniodide of mercury ($\frac{1}{3000}$) is placed in position in the inguinal region. On the morning of the operation the skin is again washed, and another pack ($\frac{1}{1000}$) of biniodide is placed in position; this is removed when the patient is on the table, and the skin is then well rubbed with turpentine.

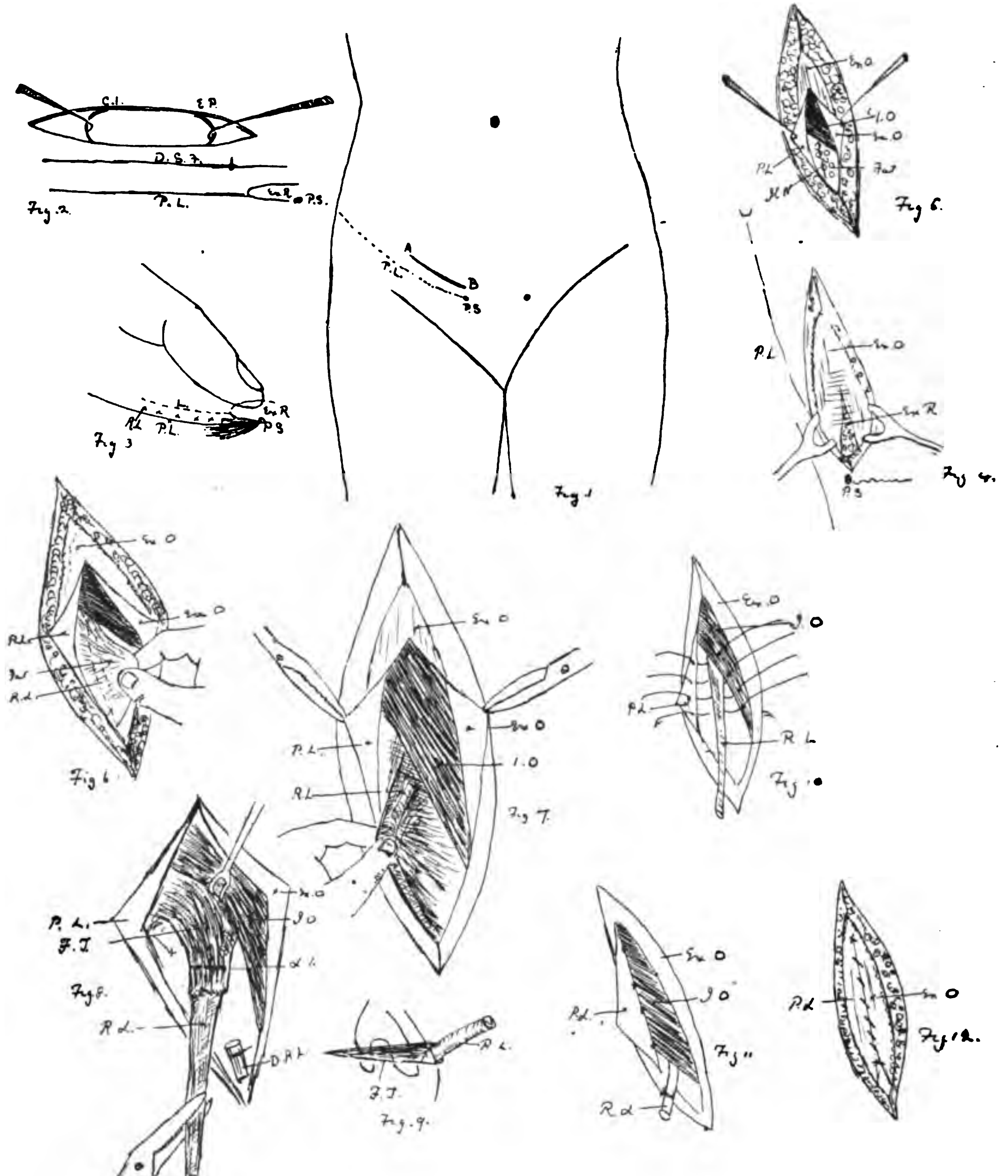
Preliminary Operations.—It is seldom that one shortens the round ligaments without performing some preliminary operations, such as curettage, amputation of the cervix, and anterior and posterior colporrhaphy. When these preliminary procedures are finished, we turn the uterus into an anteverted position, whilst holding the anterior lip of the cervix with a volsella forceps, which is now pressed back, while some gauze is packed into the anterior fornix, so as to keep the uterus in position.

Landmarks and Incision.—I always begin to operate on the left ligament first. The position of the anterior superior iliac spine is first noted, then the pubic spine is located. Between these two points the exact course that Poupart's ligament takes is ascertained by pressing the fingers into the groin, and noting the increased resistance that the ligament offers to our downward pressure. An incision is now made through the skin only, in a direction parallel to Poupart's ligament. The incision should be half an inch above the ligament; it should be one inch and a half in length, and it should end half an inch from the pubic spine. (Fig. 1.) Many different incisions have been employed, but I have finally adopted the above, although in very thin women I have frequently performed the operation through an incision not longer than half an inch. I need hardly remark that the patient must be very thin in order to do this button-hole operation.

The Superficial Fat.—The next step is to get through the fat down to the deep layer of the superficial fascia. This may be done with a scalpel, but I seldom now use the scalpel in the operation. I make the skin cut with a pair of scissors, and when the fat comes in view, I insert two hooks, and pull them asunder. (Fig. 2.) My reason for doing this is that I do not require to sever the large branches of the superficial epigastric artery and vein—(Fig. 2, E.P.)—and the branches of the superficial circumflex iliac artery and vein—(Fig. 2, C.I.)—which invariably are met with in the superficial fat. If these are cut four ligatures must be applied.

The Deep Layer of the Superficial Fascia.—This is the first stumbling-block to the inexperienced. One thinks on coming down on the layer that one has reached the external oblique muscle, and then one begins to look for landmarks, and, if the patient be thin, one can feel the pubic spine, and often the external ring, through the layer, and this only adds to the mystery. (Fig. 2, D.S.F.) This deep layer of the superficial facsia is incised, and the hooks inserted in the opening, and it in turn is pulled asunder and the fat below it is torn back, and then the aponeurosis of the external oblique is seen.

Locating the External Ring.—The tip of the index finger is now pushed to the bottom of the wound, and the pubic spine is sought for. When this is found the pulp of the finger is depressed, and the space between the columns of the ring sought for. (Fig. 3.)



McKay

To Illustrate Dr. STEWART McKAY'S Paper on "ALEXANDER'S OPERATION ON THE ROUND LIGAMENTS OF THE UTERUS."

KEY TO FIGS.

A., B.—Line of incision (Fig. 1).
D.S.F.—Deep layer of superficial fascia (Fig. 2).
Ep.—Superficial epigastric artery.
Ex. O.—External oblique muscle.
Ex. R.—External ring.
F.T.—Fascia transversalis (Fig. 8, Fig. 9).
P.L.—Poupart's ligament.
R.L.—Round ligament.
P.S.—Pubic spine.
I.O.—Internal oblique muscle.
Il.N.—Ileo-inguinal nerve (Fig. 5).
L.I.—Line of incision for entering the peritoneal cavity (Fig. 8).

This is an important step in the operation, and we should probably have less complaints about "ligaments being absent" if the external ring were sought for always. Furthermore, it should be noted that when the finger-tip rests on the pubic spine, that Poupart's ligament can be felt as a distinct convex ridge as it approaches the spine. (Fig. 3, P.S.) The operator must, of course, keep to the upper side of ridge; should he sink into the depression on the lower side he will get quite out of his proper course. Fig. 3 shows the finger-tip on the pubic spine (P.S.), while the pulp of the finger is at the external ring. (Ex.R.)

Incising the Intercolumnar Fibres and Finding the Ligament.—Having located the easily depressed spot between the columns, the operator may, still working by touch, insert a blunt hook down by his finger-tip and pass it into the external ring, and hook up its concave margin. But many will find it more advantageous to take a narrow two-bladed retractor, pass it down, and draw back the lower edge of the wound. An assistant holds this while the surgeon passes a second retractor and pulls back the upper edge of the wound. (Fig. 4.) When the walls of the incision are pulled asunder, one will usually have a little difficulty in finding the little protuberance of fat that bunches forth from the external ring. (Fig. 4, Ex. R.) When this spot is found the aponeurosis of the external oblique is split, with a pair of angled scissors, for three-quarters of an inch in a line parallel to Poupart's ligament. (Fig. 3, L.) The operator should be careful while doing this not to wound any of the veins that lie in the fat just beneath, for it is most essential that we should have no hæmorrhage at this stage, otherwise the tissues will be stained, and we canot so easily find he round ligament. Having split the aponeurosis, each side is caught by catch-forceps. The important moment has now arrived, and the next step is to find the ligament. Those unfamiliar with the operation imagine that the ligament can be seen at once, when the intercolumnar fibres of the aponeurosis are split up. Sometimes it can be seen; more often, however, it lies buried, surrounded by fat and connective tissue. This is how it is found: The operator sees before him the aponeurosis of the external oblique, split and retracted by catch-forceps —(Fig. 5, Ex.O)—the lower catch-forceps being attached to Poupart's ligament. (Fig. 5, P.L.) The floor of this area in which he is working is made up of fat, and on this fat will generally be seen the ileo-inguinal nerve. (Fig. 5, Il.N.) Across this fat, and running from without inwards, are seen the fibres of the internal oblique muscle. The floor of fat is seized with a pair of dissecting forceps, and the border that lies next to Poupart's ligament is turned up and seized between the thumb and index finger of the left hand—(Fig. 6)—and an endeavour is made to turn the fat over so that the under surface comes into view. Then with the dissecting forceps in the right hand this under surface is teased, and the ligament—(Fig. 6, R.L.)—is quickly found in the midst of the fat. It is a good rule to imagine that the round ligament actually lies next to the inner surface of Poupart's ligament—(Fig. 3, R.L.)—and it is more easily found just as it emerges from under cover of the internal oblique. While I have never found the ligament absent, I have frequently found its distal portion so thin that it was discovered with difficulty. This is especially true in young women.

Clearing the Round Ligament.—Once the ligament has been found the operator should not let it out of sight, but should begin to isolate it from the surrounding connective tissue, and after drawing it a little, it is well to seize it with catch forceps (Fig. 7)—after which the distal end—(Fig. 8, D.R.L.)—may be tied with fine catgut (No. 0). It is necessary to tie the distal end because the round ligament has a double blood supply from vessels that enter at both the proximal and distal ends. I am aware that some operators do not divide the ligament, but this is a point of no importance. Having divided the ligament at a point, say three-quarters of an inch from the distal end, the distal part of the proximal end is held by a catch-forceps, and the surrounding issue is rubbed off the ligament with a swab of cottonwool, while gentle, but firm, traction is made on it. (Fig. 8.)

In women who have had several children, the drawing out of the ligament is generally an easy feat, but in virgins the ligaments often will not "run," and if any force be exerted they will break quite easily. Should one ligament break, this will not prevent the operation from being a success.

The next question is how much ligament are we to pull out. As a rule I find that four to five inches is the average in married women, while three inches is sufficient in virgins.

Now, if finding the ligament is the difficult step for the inexperienced operator, the present is the part of the operation upon which the success or failure of the procedure will depend. I go further and say that it is upon this part of the operation that its failures have largely rested, and it is upon this part that its future increased utility is going to be built. It is obvious that unless the ligaments are drawn out sufficiently, the uterus will not be acted upon, and its position will not be altered. Therefore it is absolutely necessary for the surgeon to assure himself that he has drawn out so much of the ligament on each side that the fundus of the uterus may be felt (through the abdominal wall) to move from side to side; then the ligaments are pulled on alternately.

Now, if after making traction on a ligament so that it has come out for a few inches, one finds that it will not run, the cause may be that some bands of muscle which it receives in the inguinal canal (and which correspond to the cremaster muscle in the male) are holding it back. If any of these bands are lightly touched with the scalpel, the ligament will often come out with ease. This is the most usual cause. But in other cases we find that the ligament is firmly held, and will not give at all, and the impediment is due to the uterus, the tubes, or the ovaries being bound down and held by adhesions. Such conditions are usually ascertained before the operation is commenced. What are we to do under such circumstances ? In the past, the mere presence of such adhesions was considered an absolute contraindication to the performance of the operation ; not so in the present day; and it is only when one appreciates this fact that one comes to realise the far greater utility of the operation now than previously.

Freeing the Uterus and Appendages.—How are we to free the uterus and appendages if they are adherent ? The round ligament is held in the operator's right hand—(Fig. 8)—the sides of the wound are retracted by an assistant, and the operator proceeds to enter the peritoneal cavity. This may be done either by incising or by pushing up the sheath which envelops the proximal portion of the ligament. The sheath that one has been peeling back from the surface of the ligament is not peritoneum but the infundibular process, and is the sheath provided by the transversalis fascia. (Fig. 8, F.T.) If we find that we cannot further reflect the sheath from the ligament, it may be snipped across—(Fig. 8, L.I)—and immediately the peritoneum lining the sheath will come into view. Through the opening thus formed, the left index finger is inserted into the peritoneal cavity. Still holding the ligament by the right hand, we exert gentle traction on it, and ascertain what it is that prevents the uterus coming up. Often it is found that the fundus is held by quite slight adhesions, and a few sweeps of the finger allows the fundus to rise at once. More often we find the fimbriated end of the tube stuck to the lateral aspect of the pouch of Douglas, or the ovary may be bound down. Gentle manipulation soon frees the appendages. If, however, we ascertain by palpation that the tube is distended, and there is the slightest suspicion that there is pus in the tube, then the operation should be abandoned at once, and the abdomen should be opened in the middle line. Should we find that we are dealing with a hydrosalpinx, the tube may be withdrawn through the internal ring and then removed. I have a special pair of forceps to aid me in such cases. These have small discs of rubber at the ends of the blades, and consequently inflict no damage when the parts are seized.

If I find that the adhesions are difficult to hreak down, I usually insert the index finger of my right hand into the vagina, and so, with one finger working from above and one from below, I am able to separate very extensive adhesions. In one case it took me over an hour and a half to complete the operation, yet the woman, who had been married nine years and had had no children, became pregnant three months after the operation. I have had to break down adhesions in many of my cases, and in only one did the bleeding seem to be severe, and in this instance the patient became very blanched the day after the operation, but no bad effect resulted. It is often possible to break down the adhesions on both sides of the uterus by one insertion of the finger, but in some cases I find it necessary to open the internal ring on both sides. Having completed this work, the opening in the peritoneum and transversalis fascia should be carefully closed. The first suture should pass through the side of the round ligament, and then be made to pass in and out of the two sides of the opening, after which the whole is drawn tight, so as to pucker up the tissues. (Fig. 9.)

Suturing the Round Ligament.—I have tried at least a dozen different methods of suturing the ligament. I think the best plan is to pass the sutures through the internal oblique muscle, then through the ligament, and then the inner face of Poupart's ligament, a quarter of an inch from its free edge—(Fig. 10.)—exactly as the sutures are inserted in doing Bassini's operation for inguinal hernia. Four sutures are inserted, and I usually use No. 2 plain catgut. The ligament that is left over after the fourth suture is inserted is tied round with a suture and then cut short. After this the aponeurosis of the external oblique is united to the free edge of Poupart's ligament. (Fig. 11.) Then the opening in the subcutaneous tissue is closed with a few buried sutures of catgut, and lastly the skin edges are brought together with a few sutures of green catgut. The skin edges should not be united by many sutures, otherwise the serum that collects will distend the subcutaneous tissues, and escape as a straw-coloured fluid during the second week. The dressing consists of plain gauze, the edges of which are bound down by collodium, so that the dressing will not become displaced.

The patient is kept in bed for 16 days, during which time she may wear a pessary, if the uterus is large and heavy.

Suitable Cases for Alexander's Operation.—*Retroflexion of the uterus* in virgins and married women, when there is no prolapse, and when there are no adhesions present, is the condition for which this operation is most suitable.

Retroversion of the uterus is to me a suitable condition, for I maintain that though a retroversion may cause no symptoms, still if the uterus is allowed to remain in its abnormal position, the abdominal pressure may in time convert the retroversion into a prolapsus or a retroflexion. If after performing a curettage I find that the uterus is retroverted I always shorten the ligaments as a routine practice.

Prolapsus uteri.—If with retroflexion or with retroversion we have a slight prolapsus of the uterus, shortening the round ligament is a good operation, when used in conjunction with amputation of the cervix and colporrhaphy. It acts well in these cases, because it allows the utero-sacral ligaments (which are the chief supports of the uterus) to regain their tone. In well-marked cases of prolapsus the Alexander may be used, if the woman is in the child-bearing period; but if the menopause is passed, or if near at hand, ventrofixation is the proper operation for severe prolapse, though of late I have adopted the plan of removing the uterus by vaginal hysterectomy.

Retroflexion with Adhesions.—In one case on which I operated I found, by accident, a small hernial sac; finding that I could explore the uterus and ovaries through this very easily, I saw at once how this could be made the means of extending the utility of the operation, and, accordingly, adopted the plan. I found out later that Goldspohn had anticipated me; but I can from my experience in the procedure fully endorse his remarks on this innovation, and I have no doubt that it will only be a matter of time when this addition to the Alexander operation will be adopted on all sides. Such an easy matter is it to explore the ovaries and tubes through the internal ring that I am now adopting this mode in preference to the median incision when I wish to remove a small ovarian cyst or a hydrosalpinx.

(Read before the New South Wales Branch of the British Medical Association.)

PRESIDENTIAL ADDRESS.

Delivered at the first meeting of the Border Medical Association.

By A. Andrews, M.R.C.S. (Eng.), Albury, N.S.W.

In these few notes I do not intend to take more than a cursory glance at a few salient points, without enlarging on their scientific aspects. Thirty years ago, as you all know, in country districts the difficulty of travelling rendered it almost impossible for patients, if at all seriously ill, to reach a doctor; hence, many and exhausting journies fell to the practitioner's lot, and I leave you to imagine one's fitness to attend to a serious case after a ride perhaps of 50 or more miles, often through the night and against time. I have myself had to go out 90 miles, finding at the end of my journey a patient with "ruptured kidney" and his wife and brother both suffering from delirium tremens; no woman or nurse available, and the only help a young tutor; no means of getting any medicine beyond that taken with me. I was detained there five days, home work taking its chance in the meantime. Now, thanks to better roads, skilled nursing and private hospitals, this is all changed, and the lot of a country practitioner is much alleviated, though I doubt if his income on the average is nearly as large. Fees then were often large, and frequently cash.

However, these are not the points that I wish to draw attention to, but what may be best described as "a change of type in disease." Some affections have entirely disappeared, while others have become much more frequent. First, one affection which was very common when I commenced practice in Australia, has now quite disappeared. I refer to that which was called "low, or colonial, fever." This was very common in this part 30 years ago, and one or more cases were almost always under observation, while it was difficult to find anyone over 30 that had not at some time suffered from it. I have not seen a case, I believe, during the last 15 years. It is often said by those who have not had to deal with it that it was merely "typhoid," which was not recognised as such. Anyone that ever saw a case will agree that this view is incorrect. That it was malarial in its origin, I have no doubt, as even severe cases could be brought to a stage of convalescence in two or three days under large doses of quinine. I have seen men completely comatose, and with a temperature of over 105°, practically cured in that time by ten-grain doses given every four hours. It was more prevalent in wet seasons and marshy places; but whether mosquitoes had any part in its spread, I am not in a position to state. I attribute its disappearance to the opening up of the country by closer settlement, with its accompanying increase of cultivation and better drainage. In country towns, such as Albury, typhoid was rare in those days, and I think all will allow that quinine has no power of aborting that disease. Another affection which is now much less common and severe is that form of dyspepsia caused by the indulgence in strong tea in large quantites. Thirty years ago nearly all women and many men over 30 suffered severely from this. The improvement may be fairly attributed to the improved quality of the tea now used. Instead of the highly coloured and adulterated Chinese article, we now have chiefly Indian or Ceylon growth. Certainly it is used quite as freely, as the reduction of price has placed it within reach of all. Functional cardiac disturbance in men, caused by smoking strong and inferior tobacco, has for the same reasons become less prevalent. Epidemics of ophthalmia, or so-called "sandy blight," are much less frequent and severe, owing, probably, to the spread of sanitary knowledge among the population. Hydatids, though still fairly frequent, do not trouble us so much, a result probably due to greater care as to drinking-water. To the same cause may be attributed the great lessening of that scourge of children, dysentery. Every summer was ushered in by an epidemic of this, leading on to ulceration and often serious hæmorrhage from the bowel. Though occasionally fatal now, it is not nearly as severe and frequent as formerly, owing probably to better sanitation and care in dieting and treating children. Among diseases which may almost be called "new," we may instance appendicitis. This did certainly occur in former years, but not to the extent that it does now. I would suggest as a good subject for future discussion, "The cause of its increased frequency." Again, we have post-nasal growths. There can be no doubt that this trouble has materially increased during the last two decades. Can we assign any reason? Dentists tell us that the palate appears to be narrowing in the rising generation. Have we here the cause, and how is it brought about? I am myself inclined to think that that product of civilisation, the "comforter," is largely responsible. The continuous effort of sucking must tend to cause a falling-in of the superior maxillary bones, and hence a narrowing of the palatal arch, and proportionate alteration of the nares. I throw this out as a suggestion, and should be glad to have the views of others on the subject.

Without going into the great improvements owing to the adoption of "antiseptic measures," I cannot refrain from referring to the great amelioration brought about by the treatment of that terrible disease, diphtheria, by the use of antitoxin. Thirty years ago a child suffering from diphtheritic croup was looked on as hopeless, and recovery was a rare event. All manner of schemes of medical treatment and the performance of tracheotomy were tried. My own experience was very unfavourable, and it was not till I had been some years in practice that I saw a case recover. I can remember how anxiously and perseveringly we would try any new treatment, only to be again and again disappointed. When the treatment by "steaming with fresh blue gum leaves" was introduced by a New Zealand surgeon we began to have some success. This method required to be carried out most carefully and perseveringly for often ten or twelve days and nights, putting a great strain on all concerned. By its aid, however, many were saved who would previously have been inevitably lost. Only those who can remember those times can realise what a dire disease diphtheria often proved. Now we may thankfully feel that all is changed, and by the early and free use of "antitoxin" we seldom need lose a case. There is one other branch of professional work which I should like to refer to at some length, if you will kindly bear with me. This is midwifery. I think that here I can show you abundance of material for future inquiry and debate. When I first commenced to attend cases, and for years after, it was not considered right to interfere, except in great emergencies, before the unfortunate woman had been in labour for 24 hours. It was also thought by many that it was almost a crime to give chloroform merely for the relief of the pains, which were looked upon as a Divine institution and not to be avoided without the stigma of "irreligion." How this is all happily of the past is known to you all. I will put before you as shortly as I can a comparison of the first 250 cases I attended after coming to this district and my last. They will illustrate in a striking manner the "change in type of disease." I must first premise that the figures I refer to cannot be held to apply to the population in general, as it is well known that many women do not avail themselves of medical aid in normal confinements; nor will the proportion of the sexes bear comparison with the Registrar-General's returns.

The proportion of sexes born in the first 250 cases was 151 male and 106 female; in the last, 147 and 107 respectively.

Irregularities, including all malpositions and complications, were nearly identical in number, viz., 117 in the first and 116 in the last. It is when we come to analyse the nature of the irregularities that we find the change. Still births are reduced from 24 to 15, and post-partum hæmorrhage also from 18 to 3. The ever-present bugbear of post-partum hæmorrhage of olden days has nearly disappeared, and one can now without anxiety go to a case with no such styptics as perchloride of iron in our bag. I dare say that there are some here who have never seen that drug used in such a case, but I can remember more than one in which I have had cause to be thankful for its aid. I have also a very vivid recollection of the first case in which I ventured to use a hot douche to stop hæmorrhage in an exhausted patient. The nurse (one of the old school, who had seen many more children born than I had) was nearly frantic, and charged me with wishing to kill the woman, and though she eventually allowed that the patient recovered, she spoke often and strongly against my treatment.

Of malpositions of the fœtus, in the first series there were 22, while in the last they numbered 65. This remarkable discrepancy is entirely due to the great increase of frequency with which the occipito-posterior presentation is now met. I was prepared to find that it was more frequent, but it was not till I examined my notes that I was aware of the great increase from one case in the first series to 52 in the last.

Can we find any reason for this ? Is there any material alteration in the mode of life or work of women ? Has the placenta and its place of attachment to the uterus anything to do with the position of the child, as some European writers claim ? Has any alteration in the shape of the pelvis taken place here ? We have here endless matter for discussion. I believe the matter has already received some attention in other places, and the increase of frequency is not confined to this district. The conditions of life and work of women are certainly not harder than those of their mothers. In many ways they are not exposed to as much hardship. Though I have no statistics on the point to place before you, I am fairly satisfied that the country girls of the present day are not more addicted to "tight lacing" than formerly, and many never wear corsets at all. If the position of the placenta governs the presentation, why does it now adhere to a new site ? A careful study of the position of attachment of the placenta in these cases might be fruitful of result. My notes do not give much information on the point; but in the first series only one case of placenta prævia is mentioned, while there were seven of partial and complete in the last.

In the first series four deaths occurred, two of whom were suffering from measles, while I am happy to be able to relate that there were no deaths in the last. I have adopted the plan of interfering as little as possible after the birth of the child, recognising that nature is far less likely to produce noxious matters internally than we are to introduce them from without. I never use a douche without there has been a great amount of handling, and then usually only to the vagina. I consider that the separation of the membranes leaves a perfectly aseptic surface, bathed in blood itself aseptic. Thus, provided that drainage is free, little trouble need be feared. Gentle manipulation of the uterus till firm contraction takes place guards against hæmorrhage in almost all cases. There are many more points which we could usefully dwell upon, but I will content myself with thanking you for the patient hearing you have so graciously accorded me.

EARLY OPERATION IN TYPHOID PERFORATION.

By A. Jefferis Turner, M.D. (Lond.), Hon. Medical Officer Hospital for Sick Children, Brisbane.

THERE are some abdominal accidents that imperatively demand immediate operation, and I think typhoid perforation is one of them. It is not of very rare occurrence; according to Murchison,[1] perforation takes place in 3 per cent. of all cases of typhoid fever, and the experience of the Brisbane Hospital is closely identical.[2] Under medical treatment it is almost invariably fatal; probably to put the mortality at 95 per cent. is not an over-estimate. This appalling mortality is due to the very slight tendency to the formation of adhesions around a deep typhoid ulcer. They are usually absent; fæcal matter escapes into the general peritoneal cavity, and general peritonitis is a fatal disease. When a recognisable perforation occurs during an attack of typhoid there should, I think, be no difficulty in deciding whether and when surgical interference is necessary. An operation should be performed, and at once.

I am aware that some advise waiting until the initial shock of the perforation has passed away, and successful cases have been recorded after 12 or even 24 hours' delay, when peritonitis has been already present; but I cannot subscribe to this doctrine. I would rather urge that a peritoneal cavity soiled with fæces should be cleansed if possible before peritonitis has commenced, and that every hour of delay means so much thrown away of the patient's chances. I think the only justification for withholding or delaying operation is (1) that the patient is moribund, or (2) that the diagnosis of perforation is uncertain.

Diagnosis is the *crux* of the whole matter, and, fortunately, the occurrence and the time of perforation are frequently marked by distinctive symptoms, the latter being often fixed to the very minute. Latent perforation—the symptoms being masked by the grave condition of the patient in other respects (aggravated delirium, stupor, intestinal distension, etc.)—undoubtedly occurs. In these cases operation is least hopeful, owing to the critical condition of the patient, and probably also to the severity and multiplicity of the local lesions. But masked perforation is exceptional, especially in cases treated by cold bathing, in which the intellect is nearly always clear. Hare observes that during three years of this treatment in the Brisbane Hospital 34 cases suffered perforation, *but so clear was the mental condition in all these patients that in every instance they were able to fix almost exactly the time of the accident*[3] A not inconsiderable proportion of perforations occur in patients who are convalescent, and in these the symptoms are likely to be most definite, and the prospects of immediate operation most favourable.

The main symptoms of perforation are sudden abdominal pain, vomiting, collapse, abdominal facies, and change in the pulse—increased frequency, diminished size, and increased tension. Rigidity of the abdominal muscles is less marked than in perforations of hollow viscera occurring in healthy persons, no doubt on account of the muscular wasting of typhoid. Distension may be present at the time of perforation, or may be absent, and to wait for its development in the latter instance would be folly. The pain, unless the patient be partially unconscious, is of usually perfectly definite onset and sometimes intensely severe. Often it is definitely localised, and then points to the locality of the perforation,[4] though sometimes it is vaguely referred to the umbilical region. Vomiting may occur immediately with the pain, but usually soon after. Dr. Hare has pointed out how this causes increased extravasation of fæces, and urges that it should be prevented by injecting morphia.[5] This advice appears good, provided the surgeon has definitely made up his mind to operate; otherwise morphia would, I think, be better omitted. The collapse and abdominal facies may be well marked, and are then most valuable signs, but too much weight should not be attached to their absence. In conjunction with the sudden pain, a sudden and definite change in the pulse is of the greatest importance in the diagnosis ; the pulse becomes more frequent, smaller, and of higher tension—symptoms which result from and point to peritoneal irritation. On the occurrence of symptoms suggesting perforation, the medical man in attendance should be informed *immediately*, either by the hospital resident, or, in a private case, by the nurse. If the patient has been watched carefully during his illness, I think the cases will be few in which a perforation cannot be diagnosed. A delay of one or two hours might be allowed to establish the diagnosis, time which might be profitably employed in making preparations for the operation ; but I do not think there should be any further delay. If the patient is collapsed he may be given strychnine and perhaps morphia hypodermically before the operation. The strychnine may be repeated during and after the operation, and saline transfusion may be used also.

The operation itself is a simple one. In the overwhelming majority of cases the perforation lies in the last 12 inches of the ileum.[6] The base of the perforated ulcer should be turned inwards by one or two rows of Lembert sutures. Search should be made for a possible second perforation, and this or any ulcers so thin as to threaten to perforate should be similarly treated. The peritoneal cavity should be abundantly sluiced out with hot water or hot saline, using many quarts, and not forgetting the pelvis and lateral pouches. Probably a drain should be left in for a day or two.

Some unsuccessful results have, I think, been due to insufficient douching, just as many have been due to needless delay. To stitch up a perforation, but omit to cleanse the peritoneum of the acrid fæcal matter which will excite peritonitis, is likely to be futile.

It is only recently that I have had an opportunity of putting my opinions to the test of practice. The patient, Jessie B, aged six years, admittted into the Children's Hospital on February 25th, 1904, was one of a family in which several were attacked by typhoid at about the same time, and the child's father died of the fever. The diagnosis was verified by the serum reaction. The fever was of moderate severity, and the temperature slowly fell to normal on March 10th, the 21st day of the illness. On March 26th she had a dose of castor oil, which acted well. On the evening of the 27th the temperature rose to 101.6°, after having been nearly normal (never rising over 100°) for 17 days. It remained high on the 28th till evening, when it fell to normal, rising next morning at 6 o'clock to 102.8°, but rapidly falling to 99.2° at 2 p.m. During the night she had vomited some curdled milk, and did not take her milk so well as usual during the day.

On March 29th I saw the child on my usual visit, and her condition at about 4 p.m. showed nothing noteworthy, certainly nothing to arouse alarm. An hour later, at 5.10 p.m., without any apparent cause, she had a sudden severe abdominal pain, attended by pallor and pinching of the face, and immediate vomiting. The pulse became small and rapid (160) and the rectal temperature 99.8°. After the first onset the pain was not severe, but the collapse persisted. At 8 p.m. I saw the patient again, in company with Dr. Bancroft. The temperature was 101°, the pulse 156, small, but of moderately high tension. The face was pinched, the expression being markedly "abdominal." On being questioned, she complained of pain, and referred vaguely to the umbilical region. There was no distension; slight abdominal respiratory movements, recti rather rigid, liver dulness normal. On palpation a tender spot was found about midway between the right anterior iliac spine and the umbilicus, pressure on which increased the facial distortion.

She was placed on the operating table at 8.40 p.m., exactly 3½ hours after the perforation. A hypodermic of strychnine was administered, and chloroform, followed by ether. A vertical incision was made below the umbilicus, a little to the right of the median line. The parietal peritoneum was injected, and on incising it a little turbid fluid escaped. The ileum was empty, and its lower 12 inches showed intense superficial injection. On following it towards the cæcum a minute ragged tear was found in the middle of a typhoid ulcer with thickened edges about five inches above the cæcum. A very fragile adhesion was broken through in pulling this part of the bowel through the wound. Fæcal matter was seen oozing through the tear, which was closed by turning it in with a row of fine silk Lembert sutures. On account of the friable condition of the walls of the ulcer this stitching did not appear secure, and a second row was inserted, turning in the whole ulcer, and narrowing the lumen of the bowel considerably at the part sutured. Some time was spent in examining the lower part of the ileum, but no other perforation or evidence of ulceration was found. The appendix was healthy. The peritoneal cavity was thoroughly washed out by irrigation with many quarts of hot saline solution. A little fæcal matter came away, and some clots from the pelvis. The wound was closed by simple sutures of silkworm gut to save time, and a rubber and gauze drain left in. During the operation one pint of saline solution was transfused hypodermically into the axillæ, and more strychnine given.

When the child was put back to bed the pulse was very rapid and thready, but improved after a third injection of strychnine. At 3 a.m. there was severe abdominal pain, which was relieved by $\frac{1}{20}$ grain of morphia. Nothing was given by the mouth except a few teaspoonfuls of water. She was very thirsty. The pulse varied from 160 to 180; there was no distension. Strychnine injections were continued at intervals, and nutrient enemata given. On the 31st her condition seemed slightly better, and a little peptonised milk was given by the mouth, but this had to be stopped, as she began to vomit green fluid frequently. On April 1st the vomiting continued, and her condition appeared very grave. Abdominal distension, which had been previously absent, commenced to appear. Normal peristalsis was in abeyance, and I feared she would not recover. Knowing that the perforation was securely stitched, and that there were no other thin-walled ulcers, I gave her two grains of calomel in divided doses. This was followed by a large, loose evacuation in the evening, and from that time she began to improve slowly. Further progress was uneventful. A little quiet suppuration occurred in one axilla as a result of the saline transfusion, which had been given hastily and so, probably, with imperfect asepsis. The child went to the Sandgate Sanatorium on May 9th, gained strength rapidly, and was discharged in good health on May 22nd.

This case was a favourable one for operation, in so far as it was a single perforating ulcer during convalescence. On the other hand, the tender age of the patient and the very grave collapse were not favourable conditions. I am very much indebted to Dr. Bancroft, who kindly came out to the hospital with me, and gave me his moral support in urging operation and his help in its performance. I am indebted also to our late resident, Dr. Lucy Gullett, for informing me promptly of the perforation, and to her and the nursing staff, who tended the patient through a very critical period with care and skill. Lastly, credit must be given to the child's mother, who, when the situation was explained to her, instead of opposing operation, as I had expected, said we were to "save the child if we could."

References.—(1) Murchison on Continued Fevers, third edition, p. 667. (2) Hare. Cold Bath Treatment of Typhoid Fever, p. 117. (3) Hare. *Loc. cit.*, p. 179. (4) Hare. *Loc. cit.*, p. 188. (5) *Loc. cit.*, p. 181. (6) Murchison. *Loc. cit.*, p. 628; 27 out of 39 cases. Hare. *Loc. cit.*, p. 189; 27 out of 32 cases.

(Read before the Queensland Branch of the British Medical Association.)

GUNSHOT WOUNDS IN THE ABDOMEN.

By W. A. Verco, M.B., Ch.B., Adelaide.

On November 12th I was called to a man, *æt.* 21, who had shot himself with a revolver an hour previously. He held the revolver in his right hand, but did not know in which direction he pointed it. There was a wound of entrance over the sixth rib on the right side in the nipple line, but no exit wound. There was a little pain at the seat of entry, and almost unbearable pain in the left shoulder. The pain in the shoulder was very severe when he moved or when he breathed. He did not remember having knocked it or fallen on it after the shot was fired. As he was suffering considerably from shock, some morphia and strychnine were administered hypodermically. An hour afterwards he got severe pain in the right side of the abdomen. Later he vomited, and there was one little clot of blood in the vomit. There was also a little tenderness on pressure in his right loin, and it gave him pain to straighten his right leg down on the bed. Hence it was evident that the bullet had gone downwards and backwards from the point of entrance, and had traversed the liver and peritoneal cavity, and was embedded in the psoas muscle or the contiguous parts of the right back, The patient passed urine at 10 p.m., but nurse did not see any blood in it. However, some was drawn off in the morning, and there was no doubt as to the presence of blood, so that the bullet had gone through his right kidney as well. From the position of the duodenum between the liver and the kidney, I feared that it might have been penetrated, too. This was soon proved to be the case by the presence of blood and bile in the ejecta and by the general peritonitis which soon supervened. For the next four days the patient was very bad; the abdomen distended and painful all over; incessant sickness of bile and blood mixed together; quick pulse; clammy sweats, and temperature ranging to 103°. On the night of the 17th he threw up over a pint of blood and bile, and thereafter started to mend. Vomiting ceased, temperature went down to normal, pulse improved, abdominal distension subsided, and bowels began to act regularly. I may state that from the first the patient had been fed on nutrients, and though the nutrients were still continued, from this time he had a little fluid by the mouth.

On the 19th the temperature started to go up again, and there was a commencing feeling of heaviness in the right side and back, together with a little dull pain. A few days later there was a little pain on swallowing, and the patient commenced to perspire on sleeping. The liver dulness was gradually increasing upwards, especially behind, and the lower edge of the liver was depressed and tender on pressure. On the 26th the feeling of heaviness and discomfort in the right hepatic region was increasing, and also the pain in the right side of the abdomen. The evening temperature was only 99.2°. On the 28th the temperature was 101.6°, and the pain worse. Drs. J. C. Verco and Poulton kindly saw the patient with me, and it was decided to give him ether and explore. Under ether, pus and blood were found by the aspirator, a piece of the ninth rib removed in the mid-axillary line, and an opening having been made through the pleura and diaphragm, a large collection of pus and blood-stained fluid was let out from between the diaphragm and liver, together with several pieces of blue serge coating, which had been carried into the tissues by the bullet. The cavity was drained by a large tube. The operation did not relieve all the pain in the right chest, and during the next week there was severe pain in the right axilla and back, which was gradually increasing in intensity and in its extent. Breathing was becoming quicker, and there were tubular breath sounds in the back, extending up to the mid-interscapular region. The right base was dull on percussion, and there was diminished v.v.; temperature normal, and pulse 80. On the 14th of December the temperature was up again, so he was anæsthetised, and blood-stained fluid having been found in his pleura cavity, a piece of the eighth rib was removed from the back, the pleura opened, and a drainage tube inserted, Two days later the poor unfortunate had pain in his left leg and thigh, and within 36 hours he had a typical and severe thrombosis of his left femoral. On the 23rd there was scarcely any discharge from his right pleura, and the tube was left out. There was still some discharge from the sub-diaphragmatic opening, and the temperature was 100°, kept up, no doubt, by his left leg, which was still very painful, though the swelling was gradually subsiding. At the date of writing this paper there is still a little discharge from the suprahepatic opening, possibly from a hidden bit of serge. The bullet has been located by the X-rays, just below the twelfth rib, on the right side, and three inches from the spine. It has not yet been removed.

This case brings to one's mind the doubt as to which is the better course to pursue when there is a bullet wound in the abdomen: whether to operate and see if there is any hole in the hollow viscera, and, if there is, to sew it up; or whether it is better policy to leave the patient alone and trust to nature's reparative process.

Nearly all military authorities are agreed to leave abdominal bullet wounds alone, as they find that this treatment gives the best percentage of recoveries. But the conditions in a war and in civil life are entirely different, and what applies and is best in the one case is not necessarily best in the other. In the field hospitals the conditions are not conducive to success in abdominal surgery. It is almost impossible to have asepsis. On the other hand, if the patient be taken to the base hospital, the time elapsing between the infliction of the injury and his admission to this institution almost precludes any advantage being gained by resorting to operative measures. Either the wounds are sealed by a little local and adhesive peritonitis, or else general peritonitis has developed. In the first condition it is quite unnecessary to interfere, and in the latter, in nearly every instance, it would be too late. But in civil cases of abdominal wounds it is different. Here one is probably within easy distance of a public or private hospital, with all aseptic arrangements. Under these circumstances, would it not be better surgery to open the abdomen, see if there is any penetration of the hollow viscera, and, if such be the case, to sew it up, tie all bleeding points, and clean away any escape of the contents that may have occurred? Here you have the chance of preventing a general, and very frequently, fatal peritonitis; also of preventing your patient from bleeding to death. Of course, if operative measures are to be resorted to, it should be early in the case, just as in perforation of any hollow viscus from morbid causes. It should be done directly the shock of the injury has pased off. If delayed longer than 12 hours, it is better left alone. If in typhoid fever, with your patient ill, and his resistance much lowered by the disease, it is considered good surgery to open and repair a perforation of the bowel, how much more so to open and repair a perforation caused by a bullet in a healthy man?

Again, in military practice the wound is often inflicted with the stomach and intestines comparatively empty, and where the escape of the contents is naturally reduced to a minimum. In civil practice the stomach and intestines are frequently full, and the risk of leakage is therefore much greater. Again, when the stomach and intestines have much fluid in them, the opening in their walls is always much larger from the "explosive action" of the bullet. There is one other reason for operation in cases like the present one, and that is, in the case of missiles fired at close quarters, as in revolver injuries, there is much more tearing of the hollow organs, and not the clean penetration that occurs in a missile fired at a distance, especially when of the small bore variety.

With these facts before us, one cannot help thinking that in civil cases of gunshot wound of the abdomen, the surroundings being favourable, the abdomen ought to be opened as soon as possible after the injury, and the wounds of viscera, if any, sewn over.

(Read before the South Australian Branch of the British Medical Association.)

NOTE ON A CASE OF GUNSHOT WOUND OF LIVER, AORTA, SPINE.—SURVIVAL FOR 33 DAYS.

By B. Poulton, M.D., M.R.C.S., Hon. Surgeon Adelaide Hospital.

J. W., a man aged 21, was admitted on February 8th, 1904. On the previous day a companion was endeavouring to unload a Winchester rifle, bore .22, when it exploded whilst held in the horizontal position, and pointed directly at the patient at a distance of a few feet. The man received the ball in the abdomen, and fell immediately, losing sensation in his legs, but retaining consciousness. A surgeon who was called in ordered abstention from oral feeding, nutrient enemata, and advised hospital treatment. A 40-mile train journey next day was well borne. There had been no nausea, no vomiting, no blood passed per rectum. On admission he was paraplegic, with a distended bladder, but no priapism. There was no abdominal distension; the liver dulness was well defined. Sensation was present in the skin of the left hip, but was not elicited as regards the rest of the lower extremities. The right leg was colder than the left, and the right posterior tibial artery beat less forcibly than the left. The heart's apex beat was found an inch internal to the nipple; the radial pulse, 120, fairly full and regular. A very small wound, with slightly bruised edge, was found slightly above the apex of the xiphoid cartilage, and just to the left of the mid line. There was no exudation from the sealed opening. Dorsal examination discovered no wound of exit; considerable pain was caused by moving the body.

Later, the abdomen was tender and rigid when palpated; he complained much of thirst, and pain in abdomen and legs, and morphia was injected. Rectal feeding was continued for three days, after which time milk, in gradually increasing quantities, was allowed, water having been frequently given previously. The alvine dejections contained no evidence of hæmorrhage.

Four days after admission he suffered a convulsive attack, in which general twitching of the muscles occurred, and the legs moved. His face was noted as turning "grey" during the attack, and the temperature reached 102°. Hereafter he was able to move his feet a little, and there was return of sensation in the skin of the legs, which was hyperæsthetic in places.

Although continuing to take soft food in increasing quantities, his condition depreciated; the temperature became very irregular, and at times ran to 103°; abdominal and leg pain was severe, and necessitated periodic injections of morphia; the skin about the eighth dorsal spine became tender, and he slowly developed a small sacral bedsore and cystitis, notwithstanding every care in nursing and catheterisation. During the third week œdema of the left leg was noted and gradually increased to the end. At the same time there was evidence of fluid distension of each knee-joint.

Four days before decease, a troublesome cough, with pain in the left upper thorax, set in, and some bronchial rhonchi were heard. On March 11th he screamed suddenly at night, and was found by the nurse pallid and breathless, dying in a few minutes. Though paralysed from the first, and suffering very considerable pain throughout, he nourished a strong hope of recovery during the first few weeks, and did not exhibit any grave anxiety until near the end.

Dr. Lynch performed a post-mortem examination, at which Dr. Lionel Hayward noted as follows:—Body generally anæmic. The left pleural cavity distended, with straw-coloured serum and an immense moulded bloodclot, an excess of pericardial fluid. Heart normal. The left lobe of the liver was perforated; the wound of entry much smaller than the posterior wound of exit. In the immediate vicinity of the track through the liver was a small cavity containing bloodclot and disintegrated liver tissue. Stomach and pancreas uninjured. The track of adhesions was followed down to the aorta, which was split open, and a round aperture, about ¼ in. in diameter, shown in the posterior wall between the diaphragm and the origin of the cœliac axis. The wound of entry was sealed by adhesions, and difficult to find. Behind the aorta was a cavity containing bloodclot, bounded in front by aorta and part of the spleen, behind by the vertebral column and left kidney. The cavity communicated with the left pleural cavity through an aperture ½ in. in diameter.

The body of the first lumbar vertebra was perforated from front to back on the left of the mid line, and the distorted, flattened bullet was found lying in the cauda equina, slightly below the osseous perforation. The termination of the cord was lacerated. and the canal contained bloodclot. No injection of cord or membranes could be demonstrated. The brain was not anæmic, and there were many puncta cruenta, a noteworthy condition, considering the general anæmia. The left internal iliac vein was thrombosed. The bladder contained ammoniacal urine; its mucous membrane showed no gross changes.

The long, small .22 ball of the Winchester, you will see, is truncated like a Dum Dum bullet, and still makes a very small aperture of entry in the skin and in the aorta and bone. The ball, in this case, entered the spinal column unaltered, but was much distorted before lodging in the cord.

The accompanying exhibit shows that such a ball at close range perforates 3¾ inches of soft deal wood.

The case is reported to record the protracted survival after a rifle wound of the abdominal aorta. I am indebted to Dr. Lionel Hayward for his accurate notes, and to the pathologist, Dr. Lynch, for his complete autopsy.

(Read before the South Australian Branch of the British Medical Association.)

A CASE OF GLIOMA OF THE SPINAL CORD.

By J. Macdonald Gill, M.D. (Lond.), Assistant Physician, Sydney Hospital, and Pathologist Royal Alexandra Hospital for Sick Children, Sydney.

E.G., a married woman, 37 years of age, was admitted into the Sydney Hospital on November 4th, 1903, under my care.

The *previous history* was good. She was born in Orange, N.S.W., where she had lived all her life. She has had nine children, but no miscarriages, and no dead children.

The *family history* was good.

The *present illness* commenced 12 months ago with numbness in the feet and legs. Five months later she became unable to walk. She first lost the use of her arms seven months ago. They seem to be in much the same condition now as then—that is, as far as muscular power is concerned. The affection of the arms also commenced with numbness, but she only lost the sense of feeling in them five weeks ago.

On Examination.—There are several very extensive bed-sores; one large one over the sacrum exposing the bone; another on the right heel caused by her foot being put into boiling water. There are no cerebral symptoms, no headache, and no vomiting. Her mental condition is perfectly normal.

There is complete paralysis of both lower extremities, with secondary contractures; both limbs are flexed and adducted at the hip-joints, and flexed at the knee-joints. There are pressure sores at the places where the limbs press against each other. There is no marked wasting of the muscles, such atrophy as there is being quite accounted for by disuse. Both knee jerks are absent, although several attempts have been made to obtain them. That is probably accounted for by the rigidity of the muscles preventing any movement of the joint. Ankle clonus is absent. Loss of sensation is complete to all forms of sensation in the whole of each limb. Plantar reflex: a well-marked extensor response is obtained on each side. There is complete loss of control over bladder and rectum. In the trunk and upper extremities, sensation (all forms) is lost up to the level of the second rib, both front and back, and up to the insertion of the deltoid in the arm. The area of loss of sensation is almost exactly similar on the two sides. There is slight power of flexion and extension in the forearms and fingers; pronation and supination are lost; elbow and wrist jerks were not obtained; respiration is diaphragmatic. Facial muscles and tongue normal; there is no oculo-motor palsy. The right pupil reacts to light, the left does not; both react to accommodation.

Ophthalmoscopic examination by Dr. Gordon MacLeod; there is no optic neuritis in either eye. In the left there is evidence of old iritis with posterior synechiæ. There are some old vitreous opacities, and a small pigmented choroidal patch in the periphery of the fundus. The ocular changes though soggestive are not conclusive of a syphilitic origin.

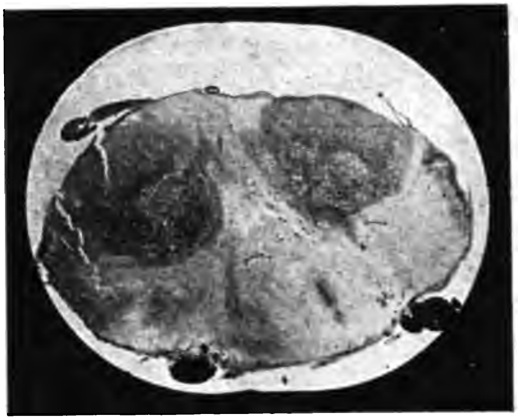
Treatment.—The patient was prescribed the following mixture: pot. iod., gr. 10; liq. hyd. perchlor., m. 30; aq. ad. 1 dr. ter. die. This treatment was kept up for ten days and then discontinued, as the patient was obviously dying from septic infection from the bed-sores. These gradually became more extensive, till she died on December 1st.

The condition of the nervous system remained unaltered during her stay in the hospital.

A partial post-mortem examination was made about 24 hours after death. Permission was obtained to examine the spinal cord only. The vertebræ and the membranes were normal. The cord showed no naked-eye changes.

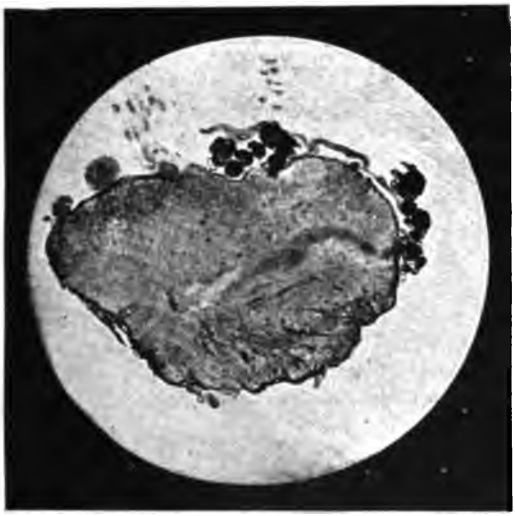
The histological examination was made after hardening first in 10 per cent. formaline, and then in Müller's fluid. Sections were prepared according to the Weigert-Pal method, which brought out the structure of the cord beautifully. Sections were also stained with hæmatein and eosine in order to bring out the structure of the portions remaining unstained in the Weigert-Pal preparations. Examination of the sections shows that in the mid-dorsal regions of the cord the normal structure is practically obliterated; it is impossible to distinguish the grey matter from the white. The greater part of the cord is occupied by a richly nucleated tissue, consisting chiefly of small round cells with strands of fibrous tissue here and there. There are a few normal nerve fibres still visible in the periphery. There is no definite cavitation, such cavities as there are being evidently due to the softening of the cord, following on the septicæmic condition from which she died, and partly due to the very soft nature of a glioma. I could not see any of the characteristic Deiters' cells. In the upper dorsal region the structure is similar to that in the mid-dorsal, although not quite so marked. In the cervical enlargement the growth has invaded for the most part the posterior portion of the cord and the central grey matter. It is interesting to note that it has completely destroyed the posterior cornua, while the anterior cornua are free. In the lower dorsal region the growth is found posteriorly and on one side. It is present in the upper portion of the lumbar enlargement posteriorly, but below that level is hardly visible. Evidently, therefore, the growth commenced in the mid-dorsal region; thence it extended both upwards and downwards, the cervical enlargement being affected to a far greater degree than the lumbar. There is no degeneration of either anterior or post-nerve roots in any of the sections.

I have but few remarks to make on the case. First, as to the diagnosis. The diagnosis of "glioma" was made during life. It seems to me hardly to have been possible to make any other. The rapidly progressive nature of the disease suggested a growth. We had a patient who in 12 months had become completely paralysed in the legs and



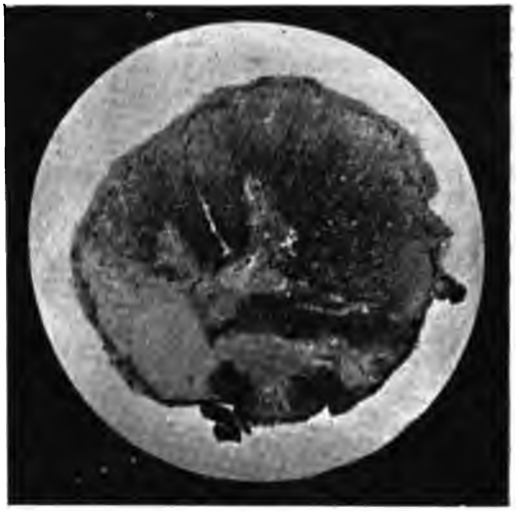
LOWER CERVICAL.

Anterior cornua visible in upper part of the section. The rowth is seen in the lower portion, and to the right.



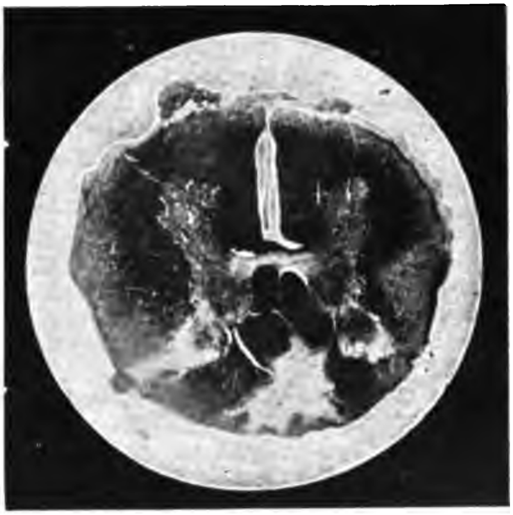
MID-DORSAL REGION.

The normal structure of the cord is lost; almost the whole of the cord is replaced by the growth.



LOWER DORSAL.

The ant. cornua show prominently; the growth is situated mostly to the left, cutting off the post cornu.



UPPER LUMBAR.

The growth is situated chiefly in the posterior part of the white matter.

almost completely in the arms. There was no dissociation of sensation as in syringomyelia; syphilis could almost certainly be excluded from the history; and there were none of the familiar features of a syphilitic lesion of the cord. It is interesting to note that the area of anæsthesia was complete below the level supplied by the fourth cervical nerve-root, whereas there was still some muscular power in the forearms and hands. The sections of the cord in the cervical enlargement show that while the anterior cornua are fairly free, the posterior cornua are completely destroyed by the growth.

I have recorded this case, as gliomata of the cord are very rare, and because the histological appearances, though at first very confusing, are very interesting. I am much indebted to Dr. Sydney Jamieson, the Director of the Pathological Department at the Sydney Hospital, for giving me every facility for the histological examination of this case. Dr. Rennie also has been kind enough to go over the sections with me, and has rendered me great assistance throughout.

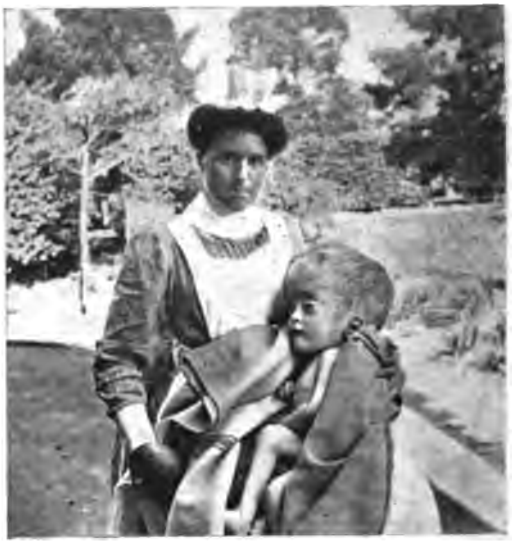
(Read before the New South Wales Branch of the British Medical Association.)

TWO CASES OF MACROCEPHALY.

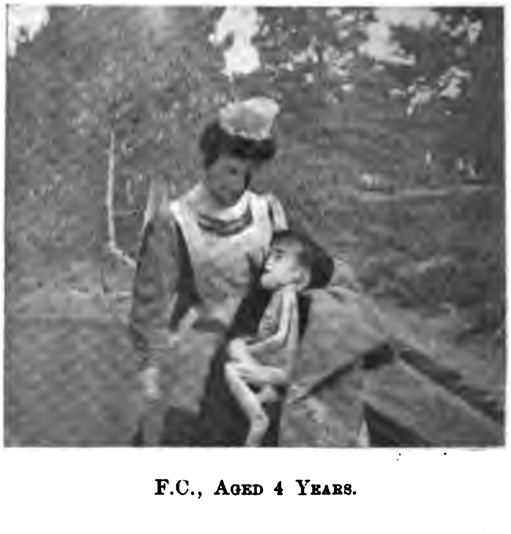
By A. S. Joske, M.D., Official Visitor to the Metropolitan Asylums, Melbourne.

The cases presented to you to-night have been inmates of the Kew Hospital for Insane for some considerable time. They are brothers, and are members of a family of three—all boys. They were both born by instrumental delivery. They appeared both to be ordinary, healthy children until three weeks after birth. In the elder child's case a neighbour noticed the head was beginning to enlarge, and the child was taken to a medical man, who informed the mother he was apparently all right; but some months later he was taken to the late Dr. Pinnock, of Ballarat, who noticed a marked enlargement. He, after watching the child for some little time, tapped the anterior fontanelle three times and removed a quantity of fluid on each occasion. The first time after tapping he strapped up the head, and kept up the strapping for 12 months, with no avail, as the head slowly increased to its present enormous size.

The second child was under treatment, first of all in Ballarat. What was done there I cannot actually discover. He was operated upon by Dr. Wood at the Children's Hospital in 1901. Dr. Wood found the anterior fontanelle widely open and turned back a flap. He opened the dura mater and pushed a bundle of two-inch pieces of chromicised gut into the lateral ventricle, and the other ends of the gut were left in the subdural spaces. The dura mater and skin were stitched, and healed by first intention. The object of doing this was that a supposed syphilitic basal meningitis had closed up the foramen of Magendie and that by giving the fluid a chance of getting from the ventricles into the subdural space of the brain and cord it might restore the normal balance of pressure, and so lead to absorption. This operation, for the description of which I am indebted to Dr. Wood, did no good. The biggest measurement at this time was 21 inches. This has gradually increased.



L.C., Aged 6 Years.



F.C., Aged 4 Years.

The family history, according to the father's story, shows no tubercular or syphilitic taint, the father and mother both appearing to be strong healthy persons; but Dr. Wood tells me that he thinks there is a history of congenital syphilis. From what I can make out of the father's history I am sceptical of this.

The third child of the marriage is now two years, and though physically frail, he appears to be an ordinary mentally healthy child of two years of age. The eldest child is now six and the second four years of age.

Since being in the Idiot Asylum they have gradually become weaker. They are now absolutely helpless, hydrocephalic idiots. Both lie in the crouched, drawn-up position ; both have occasional rises of temperature to 100° F. at night. They are fed, and are wet and dirty. The younger child has shown symptoms of falling-off in the last two months ; he has become pinched and drawn, and will probably not live long.

The exact measurements at present are as follow :—

L. C.—Age, 6 years ; weight, 2st. 2lb; height, 36 inches. Measurements : Head, 28 x 18 inches ; neck, 9¾ inches ; chest, 19¾ inches ; abdomen, 15½ inches ; length of upper arm, 6¼ inches ; circumference thickest part of arm, 5 inches ; length to wrist of forearm, 5 inches ; circumference of wrist, 4 inches ; length (to middle finger-tip) of hand, 4 inches ; breadth of palm, 2 inches ; length of thigh, 9¼ inches ; circumference thickest part of thigh, 8½ inches ; length of lower leg, 8¾ inches ; circumference thickest part of leg, 5¾ inches ; ankle, 5 inches ; length of foot, 4¼ inches ; instep, 5¼ inches.

F. C.—Age, 4 years ; weight, 1 st. 4 lb. ; height, 33 inches. Measurements : Head, 23¼ x 14¾ inches ; neck, 7¾ inches ; chest, 17½ inches ; abdomen, 13½ inches ; length of upper arm, 6 inches ; circumference thickest part upper arm, 3½ inches ; length of forearm, 5 inches ; wrist, 3¼ inches ; length (to middle finger-tip) of hand, 3¾ inches ; breadth of palm, 1⅜ inches ; length of thigh, 8¾ inches ; circumference thickest part of thigh, 6 inches ; length of lower leg, 8½ inches ; circumference thickest part lower leg, 4¼ inches ; ankle, 3½ inches ; length of foot, 4¼ inches ; instep, 4½ inches.

I have never seen similar cases since I have been connected with the asylum. Dr. Godfrey, however, informs me he had a similar case at the Neglected Children's Home. He has no record of measurement beyond the fact of the child having an enormous head. This child died, and Dr. Godfrey tells me at post-mortem he found that the brain matter had been nearly all absorbed and looked just like two cyst wells, with a very large quantity of fluid in between the cysts. In this child's case, Dr. Godfrey also tells me, that the fluid had so absorbed the sutures that the cranial bones could be all pushed about.

I am also informed that a macrocephalic was an inmate of the Ararat Asylum for a number of years, living to about 35 years of age. This patient's head was of very large dimensions.

Some curious examples of macrocephaly are :—

1. Case related by Beencente. The head began to enlarge at 7 ; at 27 it was 37 inches in circumference and 15 inches in height. This patient died of apoplexy at 30.
2. Fournier speaks of a man at Marseilles in 1616. He was 50 years of age, 4 feet in height, and his head measured 3 feet in circumference and 1 foot in height.
3. Andrews was a dwarf, 17 years of age. His maximum head measurement was 35 inches.
4. James Cardinal died at Guy's Hospital in 1825, and was celebrated for the size of his head, but the measurement was only 32½ inches.
5. Hewitt mentions one case of 27½ inches.
6. Bright mentions one case of 32 inches.
7. Klein mentions one case of 43 inches.

Since reading this paper the younger child died. A post-mortem examination was made. The body was greatly emaciated. The organs were somewhat congested, and the kidneys were thickened and hardened. There was no mark over the fontanelle of any skin wound. The bones in the neighbourhood of the fontanelle also showed no sign of any operative interference. But when the calvarium was turned back, the bundle of chromicised gut, put in by Dr. Wood, could be distinctly seen attached to the dura mater. The brain matter was nearly all absorbed, and the lateral ventricles were really a large cavity containing 3½ pints of clear straw-coloured fluid. Dr. Mollison, who made the post-mortem, thought that the condition was a syphilitic one. The case is remarkable, apart from the brain condition, as it showed that surgical scar tissue can apparently quite disappear.

(Read before the Victorian Branch of the British Medical Association.)

Messrs. Backhouse & Goyder, Medical Agents, have removed from Martin-place to Gladstone Chambers, 90 Pitt-street, Sydney.

THE RECENT EPIDEMIC OF INFANTILE PARALYSIS.

By R. B. Wade, M.D. (Syd.), Stanmore, Sydney.

It is mainly to emphasise the fact that we have recently had what I believe to be the first epidemic, or at least, the first recorded one, of infantile paralysis in this State that I am bringing these cases before you. Altman, of South Australia, reported an epidemic during the months of March and April, 1895. The cases that occurred during the recent outbreak were during the months of December and January, being, as has been found in all previous epidemics, in the summer months. It is interesting to note that in all the recorded epidemics the duration in each case was for two months, and that they happened during the summer, although not as here during the hottest period. The number of cases I have noted is 34, of which 16 were males and 18 females. The youngest was thirteen months, the oldest seven years. Between twelve and eighteen months there were four cases; between eighteen months and two years there were six cases; between two and two and a half years there were nine cases; between two and a half years and three years there were four cases; between three and four years there were five cases; between four and five years there were four cases; between five and six years there was one case; between six and seven years there was one case. The greatest number were between eighteen months and two and a half years, the number for that year of life being 15, or nearly half the total.

The history given of the onset of the attack was that it began suddenly with anorexia, fever, and vomiting, and this was the method of onset in 25; in two the vomiting was absent from these symptoms; in three the attack was ushered in with fever, vomiting, and diarrhœa; in one only were there convulsions, and this was in an epileptic; in one the paralysis occurred during pneumonia; in one during measles; and in one case only was there no history of any feverish attack. Though the history given of the onset was that it began suddenly, yet in a case that developed the disease while in the hospital wards, there was a preliminary rise of temperature, between 99° and 100° for two days, with slight malaise and anorexia, followed by a more abrupt rise, accompanied by general symptoms, headache, vomiting, etc. The fever persisted for from four to ten days, and was not of a very severe type, the temperature in those seen during it being from 100° to 102°; delirium was noted in only one case. The symptom most marked was the pain in the affected limbs, and this was present in 28 out of the 34. Tenderness was present to a marked degree in the affected muscles, and persisted for some time, in one case lasting for two months and in most for three to four weeks. There were only two cases where tenderness could not be elicited.

The date at which the paralysis appeared varied considerably, the reason for this being probably that it was overlooked, as the history given in several cases was that it was only noticed when the child got up and tried to walk, whereas one may be quite sure that it was present before.

The dates, then, at which it was stated to have occurred are :—At once, six cases; first day, three cases; second day, three cases; third day, three cases; fourth day, four cases; fifth day, one case; sixth day, two cases; seventh day, five cases; eighth day, one case; fourteenth day, one case. In four cases in which the paralysis was sought for each day, in two it appeared on the fourth day and in two on the seventh. An incident noticed during convalescence was sleeplessness, the child being kept awake by pain in the affected limb. This was noticed during the first two weeks after the cessation of the acute attack, and was present in ten of the children.

The following are the notes on a case seen from the beginning :—Female, aged six years. Has been in hospital for past three months with necrosis of the left femur. On January 11th the temperature rose to 99.4°, where it remained for two days, being normal on the third. On the fourth rose again to 102.4°; seemed ill. There was headache, anorexia, and vomiting once only; complained of pain on the right leg being moved. The temperature ranged from 101° to 102°, and on the seventh day the right leg was found to be paralysed, the child complaining also of pain in the right arm. Later in the day it was found that the child was unable to use the right hand for fine movements, such as threading beads. The child had been able to use the right leg quite well the previous day. The temperature gradually fell, and reached the normal line on the twelfth day, where it remained.

On examination, child very anæmic and wasted; tenderness of all right leg and of right forearm; right leg completely paralysed, knee jerks and plantar reflex both absent in it; some weakness of the extensors of the right hand. The hand was completely recovered in two weeks. Two months later there was complete paralysis of the extensors and peroneal muscles, considerable loss of power of the calf muscles, and complete recovery of the muscles of the thigh, with return of the knee jerks. The limbs were affected as follows:—All four limbs, four cases; one arm and both legs, in four cases; one leg and both arms, in one case; right leg and right arm, in three cases; left leg and left arm, in two cases; left leg and right arm, in one case; both legs, in five cases; one leg, in thirteen cases, the right being affected eight times and the left five; one arm, in one case only. The following is, as far as could be determined, the order of frequency with which the various muscles or groups of muscles were attacked:—The whole of the leg, with the exception of the psoas and iliacus, six; the whole of the leg, plus the psoas and iliacus, three; the quadriceps and all lower leg, two; quadriceps and extensors of foot, four; ; quadriceps and calf muscles, one; quadriceps alone, six; all the muscles of the lower leg and foot, sixteen; the peronei and extensors together, four; the calf muscles alone, one; the erector spinæ in conjunction with complete paralysis of the leg and the muscles attached to the scapula, two; the whole arm, two; all the forearm, one; trapezius,. supra- and infra-spinatus, deltoid and all upper arm, four; deltoid, supra- and infra-spinatus and triceps, two; deltoid, supra- and infra-spinatus and trapezius, one; deltoid, the sole arm muscle affected, two; and the triceps similarly, one; the extensors of the fingers, once; the abdominal muscles, once; and the face, once. The facial paralyses occurred in conjunction with that of both legs. The affection of the abdominal muscles caused severe dyspnœa with cyanosis. There was retention of urine in seven cases, two of them lasting for four days, the other five recovering in the 48 hours.

The muscles of the limbs, which were involved in all cases, either alone or in conjunction with others, belonged, without exception, to the extensor groups, and were the trapezius, supra- and infra-spinatus, deltoid, triceps and extensors of the fingers in the upper limb; while in the lower were the quadriceps, peronei and extensors of the foot. The muscles of other groups, viz., the flexors and adductors, were with one exception never involved alone, but only as apart of a general paralysis of the limb. The exception was in the case of the calf muscles, which in one child were involved alone without affection of the extensors of the foot. As far as I could tell, the gluteal muscles or abductors of the thigh were not affected unless in association with a general paralysis of the leg. With the onset of the paralysis the affected muscles became limp and flabby, but wasting to any appreciable extent was not noticed—in those cases that were followed up—for quite six weeks.

A certain amount of recovery is the rule, but in every case there are some muscles or groups of muscles that show no indication of it. Recovery is slow, does not begin until about six weeks afterwards, and in some cases that I have under observation—some four months after the attack—improvement is still going on.

In one case where the extensors of the fingers were involved only to a very slight extent, recovery was complete within a fortnight; and in the case where the face was affected, it was nearly complete at the end of three weeks.

The superficial skin reflexes and the knee jerks were present or not according as their corresponding muscle was paralysed or not. Kernig's sign was present in three cases, its presence being due, I believe, to the pain caused by stretching the tender affected muscles when trying to elicit it. In each case the erector spinæ was involved.

In all the epidemics of infantile paralysis some atypical cases have been described, one variety in which two or more members of a family have been attacked with fever, vomiting, etc.,—some at the termination of the attack developing paralysis, others escaping scot free. One case I saw was probably of this mild type not going on to paralysis—a a child of two suddenly seized with fever, vomiting, headache, the temperature lasting four days. The only other symptom complained of was inability to walk, and there was great tenderness of the muscles of the right thigh, the joints being unaffected. By the sixth day the child was able to walk, and the tenderness had disappeared. This, in the light of there being an epidemic of anterior poliomyelitis at that time, I believe to have been a mild attack of the same nature.

Other cases are described where all the paralysed muscles have completely recovered, and these, although occurring during an epidemic, have been generally given the diagnosis of multiple neuritis, but can, I think, be quite as easily explained on the grounds of an anterior poliomyelitis.

In all cases there are a certain number of the affected muscles, and usually the majority of them, that completely recover after a longer or shorter interval; thus in two cases I have mentioned there was recovery within the month; in most, however, it takes from three to six months before they return to the normal. The explanation of this I take to be that in those cases where the recovery is rapid, there is only enough damage done to the anterior horn cells to cause a temporary loss of function, followed by their complete recovery; while in those that take a longer time there is probably enough harm done to cause a temporary loss of function of the cells, followed by a degeneration of their axis cylinder processes, as this is the only way that will account for the length of time taken for recovery, viz., the regeneration of the long nerve processes. There were no fatal cases in this series, but when it does happen it is due to involvement of the respiratory muscles. The severity of the initial attack is in no way an indication of the number of muscles that will be involved; nor does the number of muscles involved at the beginning give any idea as to the permanent paralysis that will be left, as in two of the early cases where the whole leg was affected, in one case most has cleared up, and the permanent paralysis is confined to the peronei and extensors of the foot, whereas in the other the quadriceps extensor and the whole of the lower leg is still affected. During the acute attack before the onset of the paralysis, the only point to help us to a diagnosis is the tenderness of the muscles; after the appearance of the paralysis it has to be distinguished from multiple neuritis, which may be done by its acute onset, its want of symmetry, and the permanency of the paralysis. During the acute attack the treatment must be expectant, according to the symptoms. When the paralysis is established, massage and the use of the constant current is indicated, but must be delayed until the tenderness has become diminished.

Tubby and Jones, in a recent publication, consider that much may be done to help recovery by preventing the stretching of the affected muscles by the over-action of their healthy opponents. They think that the over-stretching of a paralysed, more or less atrophied muscle, is an effectual bar to its recovery, even though central spinal control is restored. They recommend, therefore, that the joints controlled by the affected muscles should be kept in a position of rest by means of splints—a method of treatment that has also the advantage of preventing deformities. Tendon and nerve grafting give good promise of restoring function to limbs where only groups of muscles are affected.

My thanks are due to Drs. Clubbe, Gill, Jenkins and Littlejohn, who have been good enough to allow me the use of their cases.

(Read before the New South Wales Branch of the British Medical Association.)

THE RECENT EPIDEMIC OF INFANTILE PARALYSIS.

By W. F. Litchfield, M.B., Ch.M. (Syd.), Sydney.

THE following is a brief summary of 25 cases of infantile paralysis that came under my notice in the recent epidemic of that disease:—The first case occurred in November, 1903; there were nine in December, twelve in January, 1904, two in February, and one in March. The great majority of cases, therefore, occurred in December and January. The youngest child affected was four months, and the oldest six years. There were five children one year and under, eleven between one and two years, six between two and three years, two between three and four years, and one aged six years. The greatest number of cases, therefore, occurred in the second year of life, while nearly all the children were under three years. Sixteen of the children were males, and nine females.

The onset of the disease was sudden in all cases. In 13 of the children there was at the onset some general symptoms, such as fever, malaise, vomiting and diarrhœa. This lasted from two to ten days. In some of the cases there were no general symptoms, the paralysis coming on without introduction or accompaniment. There were pain and tenderness along the nerves and in the muscles of the paralysed limbs in about eight of the cases. In one case this persisted for four weeks. In the others there was none of this. At the onset the lesions were as follows :—All four limbs paralysed, 1 case; both lower limbs, 10 cases ; left leg alone, 6 cases ; right leg alone, 4 cases ; right arm alone, 2 cases ; left arm alone, 2 cases.

The degree of paralysis was not the same in all cases, but in the lower limbs the extensors of the leg and foot were always affected, and in the upper limbs the deltoid muscle. Twelve of the children were seen at a subsequent date. In all there had been considerable improvement. In the child who had the four limbs paralysed the arms had regained all their power one month later. In those that had both lower limbs paralysed, the trouble in one leg cleared up completely, except in one case. In this one there was marked weakness and wasting of the extensors on one side, with only slight foot-drop on the other. The child could walk by swinging the paralysed limb outwards. In one case, four months after the onset, there was complete paralysis and wasting of all the muscles of the left leg and thigh. The limb was shorter than its fellow, and was cold and blue. In another case, two months after the onset, the right limb was similarly affected, except that slight flexion of the hip and knee was possible and that the gluteal muscles were wasted. In the other cases the residual paralysis fell chiefly on the extensors of the leg and foot. It is too early to speak of the ultimate result in these cases, but the following deformities were seen:—Shortening of one limb, subluxation of the knee-joint, talipes varus, talipes valgus, and slight talipes equinus. It is certain that many of the cases will ultimately come under the notice of the orthopædic surgeon and the surgical instrument maker.

The treatment consisted of keeping the paralysed limbs warm, massage, and measures to prevent deformity, the latter in some cases necessitating the use of splints.

With regard to the cause of the epidemic, one can say nothing. It might just be noted that the summer was wetter and cooler than usual ; that there had been during 1903 an extensive epidemic of a gastro-intestinal influenza; and that all through the summer whooping-cough was rife, and that there was the usual crop of enteritis. There was, however, no direct connection between these diseases and the infantile paralysis.

(Read before the New South Wales Branch of the British Medical Association.)

EPIDEMIC POLYNEURITIS.

By Patrick Blackall, M.B., Ch.M., Queanbeyan, N.S.W.

THIS curious and interesting disease has only lately appeared in this community. As I have already seen a sufficient number of cases to enable me to give a fairly accurate clinical picture of the disease, it may save others much of the perplexity and doubt which I experienced if I describe it just as I have seen it here. It appears to attack only children and young adults. Of six cases which I have attended, all were between three and 18 years of age. It comes on gradually. The patient feels a little out of sorts for a day ; the next day he feels very ill, and complains of headache. Vomiting now usually comes on, and pains in the abdomen, more especially in the neighbourhood of the cæcum. There is a thick, yellow fur on the tongue, and the bowels are constipated. Temperature 101° or 102.° The pulse is slightly and the breathing considerably accelerated. The working alæ nasi with the breathing is very noticeable. At this stage of the attack it is apt to be mistaken for appendicitis ; but it will be noticed that there is an entire absence of muscular rigidity when pressure is made over the seat of pain. A day later the vomiting is less severe, or gone, the pain in the abdomen is less, but pains are felt all over the body, more especially in the limbs. If seen at this stage, the case is apt to be looked upon as one of subacute rheumatism ; but it will be noticed that there is no swelling or heat or weakness locally, and that the pain is not in the joints. At this time, too, the loss of muscular power begins to attract attention. The pains in the limbs become gradually less, but the loss of muscular power in them becomes absolute. The reflexes are lost. Pain is still usually complained of at the back of the neck. The tache méningéale is particularly well developed—better than I have ever seen it in meningitis. The bowels continue constipated and, in some cases, the patient is unable to pass urine, and has to be relieved by the catheter. The breathing is entirely diaphragmatic, as the chest walls do not move. The breathing is short and gasping. The movement of the alæ nasi and the larynx is very noticeable. Both inspiration and expiration are short and sudden, and followed by a fairly long pause. The patient speaks with difficulty, caused by inability to retain sufficient air in the lungs. Consequently he can only get out a word during each expiration. The mind remains clear throughout the attack. The temperature remains up from a week to three weeks. It varies from 99° to 102°. The paralysis gradually disappears, but in three cases out of four that have now regained their usual health, the patients were unable to extend one arm from the body, although they can flex, extend, and rotate the forearm, and the power of grasp is not much diminished. The muscles that cover the scapula, the shoulder-joint, and the arm waste away, but the muscles of the forearm are not affected. In two of the three cases it was the right arm that was affected, and in one the left. As it is only a little over two months since the first of my cases occurred, it is too soon to offer an opinion as to whether this paralysis is likely to be permanent. Two of my cases were sisters, two others cousins, and another occurred in the next house but one to where the two sisters were ill, so there is every reason to regard the disease as infectious, although it is not so to a very high degree, or so many children who have been exposed to the infection could not escape. I have treated six cases of the disease within the past two months, but until then I never saw a case of it.

A CASE OF ACUTE ASCENDING PARALYSIS.

By **Earle Page, M.B., Ch.M. (Syd.), Grafton, N.S.W.**

J.C.M., *æt* 25, had always enjoyed good health till present. *Family history:* Nothing of interest; mother died at 45, at climacteric, of causes unknown; no tubercle, no syphilis, no rheumatism; no history of strain of back. *Present history:* On March 25th, 1904, he was loading pigs; became very heated, perspired freely, and then was wet through with heavy rain; remained in wet clothes all day; next day went about work as usual. On March 27th, 1904, woke with headache, pains in limbs and down back, tingling in feet; attempted to get up, but feet and legs were very painful when walking, and returned to bed; took salts, and had bowels well opened. On March 28th, 1904, headache and pain in back still very severe; pain in legs was decreasing; could not move legs freely; some slight difficulty in micturition, delay, but it came all right; had peculiar feeling when defæcating; no vomiting or anorexia; no girdle pain. March 29th, 1904: Headache and pain in back less; scarcely able to move legs at all; great difficulty in passing urine; little coming away at time; bowels not open.

I was called to see him about 4 p.m. on this day, and found temperature 101°, pulse 108, respiration 24. The patient was lying on back in bed; skin acting very freely; no rashes. Tongue coated with thick, heavy fur; fauces healthy; abdomen, chest, and heart clear; pulse soft, regular; joints unaffected.

Nervous System.—Movements.—Can with great effort slightly raise and adduct thighs and flex legs; movements very limited; movements of arms unaffected; grasp strong and equal on two sides; can pull himself up in bed with arms and sit up; can rotate head in any direction.

Sensation.—Hyperæsthesia to tactile sensation up to umbilicus and round to back, over legs; no girdle sensation; above this line, sensation normal; muscular sense normal.

Reflexes.—Cremasteric and abdominal absent; epigastric present; knee jerks both absent; no ankle clonus; no Babinski sign. Organic: Retention of urine; unconscious of rectal movements.

Urine, acid. 1025; no sugar; no albumin; about 25 ounces in bladder.

I gave sodæ salicylate and tinct. ergot ammoniatæ, and ordered removal to hospital next day, a distance of nine miles. He arrived next morning, carried on stretcher in cart; considerably fatigued with journey. Arms and body stiff and sore; temperature 100°, pulse 104, respiration 28; legs quite powerless; hyperæsthesia not so much in evidence. *Arms* weak; grasp weak; elbow jerk present; not so marked as previous day; no alteration of sensation; no headache; no pain anywhere, but feeling of intense weakness; absolute retention of urine; bowels open unconsciously; motion quite natural in colour and odour.

March 31st, 1904.—Temperature 101°, pulse 98, respiration 22. Patient absolutely helpless in both arms and legs; lying on side; cannot turn head from side to side; mind clear, speech slow and snatchy; says three words, then rest and three more, due to breathing. *Breathing* greatly altered; short gaspy breaths; takes two or three, then interval, during which he can speak, and then two or three more. Difficulty in swallowing; cannot swallow at all except nurse raises him in bed, and then very slowly, and a very small quantity at a time. Pupils equal; react to light and accommodation; urine drawn off; feels catheter in urethra as a tickling sensation; can detect pinprick in legs, but not so readily as in arms; knee and elbow jerks absent; chest clear. About 2 p.m. became unconscious; breathing became worse, deeper; pulse 80, temperature 102°, and patient remained in this condition, dying at 6.30 p.m. without regaining consciousness. Pulse at end was very rapid and weak. I was unable to obtain a post-mortem to complete notes. The whole duration of the disease was about 108 hours; the paralysis was very rapidly progressive from lower parts of body to higher; there was no absolute anæsthesia of any part, no girdle sensation, and patient seemed to die of paralysis of respiratory centre, diaphragm moving right till end.

AN UNUSUAL CASE OF PNEUMOTHORAX.

By W. Morrison, M.A., M.D., Hon. Physician to the Ballarat Hospital.

I SHALL briefly this evening bring under your notice a case interesting on account of its rarity and the insidiousness of the onset. J.T., *æt.* 43, male, was admitted to one of my beds in the Ballarat Hospital on April 19th, 1904. He complained of severe pain, on breathing, over the lower portion of the right lung, most severe in the hepatic region. He had been ill a week. The onset was sudden, and ushered in by a rigor. He had always been a healthy man. On admission, the temperature was 102° F.; pulse, 100; respiration, 32. The percussion note was unaltered. There was a friction sound over the right base anteriorly. At the right apex the respiration murmur was puerile; the vocal resonance was unaltered. The liver was displaced downwards about one inch. The heart sounds were distinct, free from murmur, and the apex in the normal position. There was no expectoration. The patient slept well. On the 20th the physical condition was unaltered. The pleuritic stitch was unrelieved. No change took place till the the 24th (five days after admission), when there was dyspnœa, accompanied by slight cyanosis. On the 25th the temperature rose to 103.8° F., and the pleural cavity was explored, with negative results. The patient's condition became much worse on the 26th. The cyanosis greatly increased, and the respirations more rapid and difficult. On the right side the percussion note was tympanitic, except at the base. The respiratory murmur, save at the apex, was absent. There was no displacement of the apex of the heart. There was no change on the 27th. Strychnine injections and oxygen inhalations gave no relief. On the morning of the 28th the patient died.

Post-mortem.—For important reasons, this had to be confined to the thorax. The heart was normal; the left lung was normal. ***The right lung:*** The pleural cavity was distended with air under positive pressure, and contained about 6 oz. of yellowish fluid. Anteriorly over the diaphragm there were recent and posteriorly firm adhesions. The lung was pressed against the spine and was airless, except near the larger bronchi. At the lower portion of the middle lobe, anteriorly, there was a suppurating hydatid cyst, about the size of a small orange, filled with daughter cysts. One of these had ruptured through the visceral pleura. The rent was about ⅓ in. in length, and in it a small cyst had become fixed. In Nothnagel's "Encyclopædia of Diseases of the Bronchi, Pleura, and Lungs, 1902" (American edition), hydatids as a source of pneumothorax is mentioned, though no cases are cited. Trousseau (New Sydenham Society) vol. iii., p. 308, mentions this cause. He says: "When a hydatid tumour of the lung bursts suddenly into the pleural cavity, the symptoms are very much more serious, as a sub-acute pleurisy is set up, and when the bursting is both into the pleura and the bronchial tubes there is produced hydro-pneumothorax." He quotes Dr. Mercier's case. In the case I have recorded, I imagine the escape of some hydatid fluid caused the pleurisy; the daughter cyst for a time plugged the opening. As it shrivelled, air entered the pleural cavity; acting as a valve, complete pneumothorax was caused. The fact that the heart apex was not displaced, as is usual, is accounted for by the firm diaphragmatic adhesions. For the notes of this case I am indebted to Dr. Lidwell, senior resident medical officer to the hospital.

(Read before the Ballarat District Branch of the British Medical Association.)

CLINICAL AND PATHOLOGICAL NOTE.

AN UNUSUAL TWIN BIRTH.

H.B., primipara, a servant girl at Newtown, Sydney, gave birth to a child on Friday, January 29th, 1904, about 3 a.m., after two hours' labour, and concealed the child. After a few hours' rest she got up and did her ordinary work as general servant, with occasional rests during the day.

Next day she likewise rested now and again, but in the evening her mistress, thinking she was looking ill, insisted on taking her to a medical man in Stanmore, the journey involving quite half a mile walk and rather less in the tram. On examination the medical man found a child still in utero, and sent her in a cab to Prince Alfred Hospital; from there she was sent to the Home Lying-in Hospital, Newtown, where she was admitted late on Saturday night. Labour did not come on till Sunday morning, when, at 10.30 a.m., after two hours' labour, the second child was born, almost full term.

Evidently the opening in the membranes, through which the first child had come, had sealed up, for when the nurse went to rupture the membranes during the second labour, out poured a quantity of foul-smelling blood and blood-clot. Almost immediately afterwards the second bag of membranes broke, and clear amniotic fluid came away.

I was sent for later in the morning to remove the placenta, which had to be done manually owing to its being partially adherent. The placenta was of the usual type in twin births, a double one joined along one border, as were also the two separate amniotic sacs; the cord of the first child being twisted at its end, and thus through occlusion of the vessels preventing serious hæmorrhage.

There was a good deal of laceration of the vaginal walls from the precipitate labour, and, as was to be expected, she ran a temperature for some days, but Dr. McClelland, under whose care she passed, tells me she ultimately made a good recovery.

The case seems to me worth recording, owing to the length of time (about 56 hours) between the births, and what the patient had gone through in the meantime.

T. W. Lipscomb,
Leichhardt. M.B., Ch.M. (Syd.).

REVIEWS AND NOTICES OF BOOKS.

The International Text-Book of Surgery. By British and American authors. Edited by J. Collins Warren and A. Pearce Gould. In two volumes. Second edition. Philadelphia and London: W. B. Saunders & Co. Melbourne: Jas. Little. Price per part, 25s.

This work is without doubt the best all-round book on general surgery that has been recently produced. As one might expect, the different articles vary somewhat in value, but on the whole a very high standard has been attained. The selection of writers who are reputed to take a particular interest in a special branch in surgery is undoubtedly a good one, and although want of space prevents a man from doing justice to his particular branch, the condensed epitome is sufficient to supply the pressing wants of the student and general practitioner who need the gist of the most recent work done in every department supplied in a reasonable minimum of space. The chapters on Surgical Bacteriology and Surgical Technique are dealt with simply and comprehensively—sufficient at all events to supply a man with a sensible view of the most advanced teaching in matters of this kind at the present day. The work can certainly be recommended to fulfil all its claims. H.C.H.

The Bacteriology of Everyday Practice. By J. Odery Symes, M.D. (Lond.), D.P.H., etc., Assistant Physician and Bacteriologist, Bristol General Hospital. London: Bailière, Tindall & Cox. Crown 8vo. Price, 2s 6d net.

This little book is one of the Medical Monograph Series. It would be useful for the general practitioner in order to inform him to what extent a bacteriological examination would help in the diagnosis of various diseases; but it is too condensed to show him how to do this for himself, and it does not pretend to do so. There is a special chapter devoted to serum therapeutics, and in it the author rightly draws attention to the discredit serum treatment is apt to fall into unless a bacteriological examination is made and the particular organism causing the disease discovered. Antistreptococcal serum, especially, has suffered from the lack of this. H.S.S.

The Infectivity of Enteric Fever, with observations on its origin and incidence at Caius College, Cambridge, Festiniog, and Wicken-Bonant. By Alexander Collie, M.D. Bristol: John Wright and Co. 1904. Price, 1s 6d net.

In his preface the author sets himself the task of demonstrating a theorem involving three distinct propositions—(1) that enteric fever is an infectious disease, (2) that the disease is spread by direct infection from the sick to the well, and (3) that the "water theory" is a fallacy. Most of us would accept the first as an axiom; not so the author, who excuses himself by advancing a most unwarranted assumption "that the general opinion is against the view that the disease is infectious." He brings absolutely no proof whatsoever of his second, and he attempts to establish this and his third by a *reductio ad absurdum* method in criticising at some length three 30 to 40 years old reports on water-borne outbreaks by the late Sir George Buchanan. He accuses this reporter of employing gross assumptions, false premises, and bad logic; but whilst he thus draws attention to the alleged mote in his brother's eye, he fails to recognise the beam in his own. His arguments are poor, his facts bald, and his expressions loose and inaccurate. He begins nowhere in particular, pursues a devious course through 46 pages, and ends very much as he began. We observed that many Latin phrases were employed throughout the book, but we cannot add one more—*quod erat demonstrandum*—as the concluding phrase. Undoubtedly the factors involved in the spread of enteric fever still require much light thrown upon them, but we cannot hold that Dr. Collie has in this publication added anything new to the subject. Coming from an author who has had 30 years' experience of enteric fever in London, the book is a great disappointment in every way. E.S.

A Practical Text-Book of the Diseases of Women. By Arthur H. N. Lewers, M.D. (Lond.), F.R.C.P. (Lond.), Senior Obstetric Physician to the London Hospital, and Lecturer on Midwifery in the London Hospital Medical School, etc. Sixth edition, with 166 illustrations; four coloured plates. (Lewis's Practical Series.) London: H. K. Lewis, 136 Gower-street. Crown 8vo. Price, 10s 6d.

This familiar work is a good text-book for students in that the description of methods and diseases are clear, and enriched by the fruitful experience of the author. The subject generally is handled by Dr. Lewers very much as a matter of his own personal experience. That the book is not quite "up to date" is not, perhaps, always a serious fault, but it is a distinct drawback. Thus, in describing the operations of salpingo-oöphorectomy and ovariotomy, the more recent methods of treating the pedicle are not described.

The author might very well add to the value of his work by describing the ways of other workers in the modern harvest of gynæcological surgery. The volume is handy and well printed, and the illustrations invariably good. A.W.M.

A Text-Book of the Diseases of Women. By Henry J. Garrigues, A.M., M.D., Gynæcologist to St. Mark's Hospital in New York City; Consulting Obstetric Surgeon to the New York Maternity Hospital, etc., etc. With 367 illustrations. Third edition, thoroughly revised. Philadelphia and London: W. B. Saunders & Co. 1901. Melbourne: Jas. Little. Price, 22s 6d.

This work, of which three editions have now appeared within seven years, is intended chiefly for practitioners, especially such as are unable to attend post-graduate schools, and so keep themselves in touch with modern developments. The wealth of detail given will be of use to those who cannot leave their practices for the purpose of study.

Embryology is done clearly, and the section full enough to make clear the diseases arising from developmental defects. A considerable section is devoted to anatomy, and is fully illustrated with good diagrams. The rest of the illustrations are successful as a rule, but some make rather indefinite pictures. The section on Treatment in General is very fully written up, descriptions of various instruments being given. There is an account also of examination of the bladder by Kelly's speculum and other methods.

The second part, on Regional Diseases, is quite encyclopædic, including an account of all varieties of disease.

In the part devoted to diseases of the uterus, Apostoli's methods are recommended in the treatment of myomata, the author advising its application in all intra-mural cases before resort is made to hysterectomy. Electric treatment generally receives full description in this work.

For salpingo oöphorectomy the abdominal route is always preferred. When dealing with a diseased appendage, Dr. Garrigues is in favour of leaving the opposite appendage, or part of it, even if "moderately diseased."

Altogether, this work can be safely recommended as a full and reliable guide to modern work in the diseases of women. A.W.M.

A Text-Book of Diseases of Women. By Charles B. Penrose, M.D., Ph.D., formerly Professor of Gynæcology in the University of Pennsylvania. Fourth edition, revised. Octavo volume of 539 pages, handsomely illustrated. Philadelphia and London: W. B. Saunders & Co. 1901. Melbourne: James Little. Price, 18s 6d.

The present edition, the fourth, of this work is announced to have numerous additions and to give only such information as is practical and suitable for every-day use. For anatomy and pathology the reader is referred to the ordinary text-books. A new edition has, it seems, been called for every year; this would indicate a popularity which can scarcely be justified on perusal of the work.

The writer adopts the plan of describing the methods he himself employs. While the book is thus made clear and emphatic, it is not strengthened as a text-book for students, for whom it is stated to have been written. One disadvantage, in fact, is that there is not enough said on those subjects where the author is at his best. In several parts it is altogether too brief to be serviceable. Thus, the diseases of the vagina and of the menopause are disposed of in a few pages, and deciduoma malignum is not mentioned. The section on uterine displacements is very good. The methods of dealing with them receive a full description. The considerable space devoted to diseases of the ovaries is justified by good quality. So much cannot be said for that given to fibroids. The teaching in this section is not sound, and the treatment must be called unsafe. It is implied that these new growths as a rule lead to invalidism. Indeed, Dr. Penrose roundly asserts "that the majority of fibroid tumours demand immediate operation." Such views, we venture to say, put the author in conflict with the pathologist and the statistician, who show that a fatal issue from fibroids when left alone is uncommon. Indeed, it is doubtful if the sum of female longevity is much affected by them. Could this be said if "the majority" of cases of fibroid were operated on, with even the five to six per cent. mortality which the best American surgeons attain to?

The volume is well got up, the printing good; the illustrations are numerous and well executed, and none of them superfluous. Although commendable in many parts, the work cannot be recommended as a whole. A.W.M.

Messrs. W. B. Saunders & Co., publishers, Philadelphia and London, desire us to call the attention of our readers to a new work, "The Vermiform Appendix and its Diseases," by Howard A. Kelly, M.D., of the Johns Hopkins University, Baltimore, Md. This will be one of the most magnificent medical books ever published, containing over four hundred superb illustrations, in the preparation of which the artists of the Johns Hopkins University have spent many years. This work will shortly be published.

THE AUSTRALASIAN

MEDICAL GAZETTE.

SYDNEY, 20TH JULY, 1904.

THE REPORT OF THE ROYAL COMMISSION ON THE UNIVERSITY OF MELBOURNE.

WE have just received a copy of the report of the Royal Commission on the University of Melbourne, and we have perused with much interest that portion of it which deals with medical education in Melbourne. The recommendations made by the Commission in general are to be approved.

First of all, dealing with the preliminary science requirements, they suggest that the present course is too comprehensive for medical students, and that this should be considerably reduced; that a special course in Chemistry, Natural Philosophy and Biology, adapted to the requirements of medical students, should be given, and that Anatomy be taken in the first year. Secondly, they recommend that the next two years should be devoted entirely to University work, and should embrace Anatomy and Physiology. We quite agree with the statements of several of the clinical teaching staff that it is absurd to attempt to teach students the elements of surgery or medicine until they have been well grounded in Anatomy and Physiology. Thirdly, the present dissociation of the University from the hospitals has prevented the University authorities from appointing to the Melbourne Hospital suitable men to be clinical teachers in medicine and surgery. If the recommendations of the Royal Commission are adopted, this dissociation of control of the clinical teaching from the University will be abolished. Fourthly, they recommend that the number of examinations be reduced to three—a first degree examination at the end of the first year in Preliminary Science subjects; a second degree examination at the end of the third year in the subjects of Anatomy and Physiology; a third degree or final examination at the end of the fifth year in Medicine, Surgery, Pathology, Midwifery, Gynæcology, Public Health, and Medical Jurisprudence. They recommend that term examinations be held in the subjects specified, the results of these examinations to be taken into account by the examiners at the annual examinations. This last suggestion we consider a most desirable one. We are of opinion that the third degree examination is still too extensive, although fortunately for the students it is less comprehensive than it was in the University of Sydney, when the subjects of Ophthalmic Medicine and Surgery and Insanity were also compulsory. The great advance in our knowledge in modern times in all departments of Medicine and Surgery must be borne in mind in drawing up any examination syllabus, and we are of opinion that it would be to the interests of the students if Pathology and Public Health were made the subject of examination at the end of the fourth year, and the final degree examination at the end of the fifth year be restricted to the three main branches of Medicine, Surgery, Midwifery, and Gynæcology. A further recommendation bearing upon the question of examinations is that two examinations should be held each year, and that students who have passed in one or more subjects at any examination shall get credit for that subject and not have to repass it again. This, while tending to some extent to lower the standard of examination, is yet one which appears only fair to the student. A further important recommendation, and one which no doubt would have been carried into effect years ago had the necessary funds been available, is that the present Professorship of Anatomy and Pathology should be split up into two distinct chairs.

In drawing up this report the Commission have had the valuable advice of the Professors, Lecturers, and Clinical Teachers of the University ; so that the views expressed practically represent the opinions of the Medical Faculty, and we have no doubt that if they can only be carried into effect the result will be a great improvement in the teaching of Medicine in Melbourne.

THE INTRUSION OF LAYMEN INTO MEDICAL PRACTICE.

The subject of the intrusion of laymen into medical practice has recently been discussed in the English medical journals, and it is worth our while considering it as it affects us in this Commonwealth.

We are all familiar with the great advances which have been made in recent years in our knowledge of the therapeutic effects of the various forms of electricity and the different kinds of light rays ; and so extensive has this knowledge now become, and the apparatus employed is getting so extensive and complicated, that only one with a practical acquaintance with electrical apparatus can use these instruments satisfactorily. The knowledge of electricity and electrical instruments possessed by the ordinary medical practitioner is necessarily very meagre ; hence, unless special attention has been directed to this subject, a medical man is not able to manipulate the apparatus necessary for the therapeutic application of these powerful physical forces.

Unfortunately, in the past the use of electricity and magnetism has been allowed to drift too much into the hands of the quack and the charlatan, and hence the providers of electric belts, electric chairs, *et hoc genus omne*, have flourished on the credulity and gullibility of the public. It must be the aim of the profession to rescue these valuable therapeutic agents from this position ; for no one who has had practical experience of, or has seen the beneficial effects produced by the X-rays in rodent ulcers and superficial cancerous growths, or the beneficial results obtained by the high-frequency currents in the various forms of disease, can deny that in these agents we have useful additions to our therapeutic armamentaria. But as the necessary apparatus is expensive, requires some technical knowledge for its effective manipulation, and after all is needed only very occasionally in any individual doctor's practice, a certain number of laymen have stepped forward with this apparatus and now offer to provide all these modern methods of treatment which are the fashion of the moment; and these gentlemen, apparently, do not hesitate to apply these methods of treatment irrespective of control by medical men and in ignorance of the elements of anatomy and physiology. Fortunately, however, we have skilled men in our midst who have devoted themselves specially to this class of work, and who, naturally, from the combination of technical skill in manipulation and the necessary medical knowledge, secure the best results obtainable. We have also some laymen who do not presume to treat patients independent of medical men, and who are prepared only to apply the remedial measures advocated by the medical practitioner in the same way as a nurse carries out the doctor's instructions. These laymen should, we think, be encouraged in their work ; while ignorant laymen who presume to take upon themselves to treat disease because they happen to have some little knowledge of electrical appliances should receive no consideration at the hands of the profession.

But in other directions there is a similar intrusion of laymen into the domain of medical practice. We are constantly besieged with circulars and samples of patent foods and special preparations from various manufacturers all over the world. It is the wholesale chemist who now prescribes for our patients, and the medical practitioner's function is coming to be merely one of advertising the chemist's wares. Elegant pharmaceutical preparations in various forms are now manufactured and put up in such a way that the general public can purchase them direct without any reference to a medical man. Consequently, the medical man loses his consultation fee, the chemist is deprived of his reward for the time he has spent in acquiring a knowledge of dispensing, and the patient—what ?—often has lost his only chance of cure because he has dallied too long with his self-medication. The invasion into the domain of the medical man by these manufacturing druggists and patent medicine vendors is one which is fraught with danger to the general public, and should be strenuously resisted by the profession.

THE MONTH.

Food Adulteration in Victoria.

THE last annual report of the Melbourne City Analyst reveals an alarming amount of food adulteration in that city. Out of 88 samples of milk examined, in addition to a large number which were defective in the amount of fatty solids and which were adulterated by the addition of water, no less than 15 contained artificial colouring matter, and 10 contained boric acid. Of two samples of concentrated milk examined, one contained as much as 451 grains of boric acid to a gallon of milk, and the other contained 182 grains of boric acid to a gallon of milk and .006 per cent. of formaldehyde. So-called raspberry vinegar, of which four samples were analysed, contained little, if any, genuine raspberry juice. Thirteen samples of sago were found on examination to consist of tapioca. Several samples of whisky, rum, and gin showed defective percentage of alcohol. It would appear from Mr. Dunn's report that they have some difficulty in prosecuting persons guilty of adulterating food. In view of the prevalent use of preservatives, Mr. Dunn urges the necessity for inserting a clause in the Health Act similar to that of the Wine Adulteration Act which prohibits the use of boric acid, formalin, etc. He says: "According to the present Health Act, not only must the presence of the preservatives be proved, but the analyst must make a careful quantitative analysis so as to be able to prove to the satisfaction of the bench that the quantity found is injurious to health; this latter evidence resting on the medical experts, two of whom can hardly be found to agree on this matter. If the clause mentioned were inserted in the Health Act, no difficulty would be found in prosecuting in those cases where preservatives are detected." As further illustrating the difficulty in carrying out prosecutions for adulteration of food or drink, he refers to an extraordinary decision of Mr. Justice Hood, in a recent case of adulteration of raspberry vinegar, his Honor holding that as the article was known in the trade as raspberry vinegar, the purchaser obtained what he asked for. This decision is the more remarkable when one hears that the sample in question contained only 5 per cent. of raspberry juice. It is no wonder that food adulteration abounds when such difficulties lie in the path of the Public Health authorities.

State Children in Victoria.

The system of boarding out the State children with foster mothers has proved highly successful in New South Wales; but in Victoria, according to some recent statements, the mortality amongst boarded-out infants has been unusually high. At a recent meeting of the Melbourne Board of Public Health Councillor Wood moved: "That, having regard to the excessive mortality occurring amongst boarded-out infants of the State, a conference be called of persons interested in the question for the purpose of deciding what action is necessary to improve the present unsatisfactory condition of affairs." He stated that whereas the infant mortality in

Victoria during late years ranged from 10 to 12 per cent., the rate in South Australia (where each nurse was restricted to two infants) was only 5 per cent. The state of affairs in Victoria was appalling. On Dr. Gresswell's suggestion the motion was altered to read : " That the question of the causation of infant mortality be investigated by the officers of the board, and that steps in the direction of reform be taken by a conference of persons interested or otherwise." This was carried. In view of the low birth rates, the preservation of infant life is a matter of supreme importance if the population of these States is to increase at a satisfactory rate, and we hope that the results of the conference proposed in this resolution will be some practical step in the reduction of this excessive infantile mortality rate.

Proposed Infectious Diseases Hospital, Hobart.

A considerable discussion is still in progress as to the best site for a hospital for infectious diseases in Hobart. At a meeting of eight local authorities, presided over by the Mayor of Hobart, a recommendation was made to the effect that a portion of the General Hospital grounds should be used as a site for this proposed hospital. The chief health officer, however, did not approve of this suggestion, and the Chief Secretary the Hon. Dr. McCall, states that this proposal, therefore, cannot be sanctioned. The Government seem disposed to adopt the proposed site in Wentworth-street, being satisfied as to its suitabliity; but they are prepared to consider any alternative site which may be approved of by the Chief Health Officer, and whose acquisition does not involve further outlay of State funds. The Hon. Dr. McCall is emphatic upon the necessity of an infectious diseases hospital for Hobart and the adjoining districts.

Hospital Accommodation for Sick Infants in Sydney.

The Women's Progressive Association has been doing some useful work recently in endeavouring to take some steps to diminish the rate of infantile mortality. They have been making enquiries as to the amount of accommodation available for sick infants in Sydney. At the Royal Alexandra Hospital for Children the rule for age admission is between 18 months and two years, and it is only in urgent cases that young babies are admitted. It is probable that in the new hospital some provision will be made for the reception of young babies. At the large general hospitals the accommodation for children is very limited. The Sydney Benevolent Society has provided a ward in the new hospital to accommodate 36 infants. The Waitara Home provides only 12 cots for sick babies. It would appear from this that the existing accommodation for sick infants is certainly defective. But we certainly do not agree with the suggestion that a special hospital should be built for sick babies under two years. There is difficulty enough at present experienced in the maintenance of existing hospitals, and we think that with the hospital accommodation already in existence, and that about to be provided, there will be quite sufficient accommodation to meet the needs of sick children.

The Administrative Control of Tuberculosis.

In our correspondence columns will be found some important correspondence between Dr. McIntyre Sinclair, the medical superintendent of the Wentworth Falls Sanatorium and the Commonwealth Minister for External Affairs, which has resulted in the minute appended to this correspondence, which has already been published in the lay press. No one can deny that it is undesirable that paupers suffering from advanced consumption should be allowed to enter the Commonwealth and become a burden on its charitable institutions. But we certainly think it would be unjust to exclude persons who are suffering from consumption and who had a reasonable hope of being cured by residence in this country, and who had sufficient means to prevent them from being a burden on the community. It is often a matter of extreme difficulty to decide positively upon the prospects of cure in certain individuals suffering from pulmonary tuberculosis, and there is no doubt that extreme hardship would be inflicted on many poor sufferers if any hard and fast lines were to be laid down excluding all persons suffering from pulmonary tuberculosis from landing in Australasia. We should be extremely sorry to see such a state of things repeated in Australasia as is said to exist in New Zealand, where the poor consumptive is hunted out of house and home and treated in such a way as seems almost incredible in any so-called

Christian country. We trust that the Commonwealth Government will pause and consider carefully before they attempt to totally prohibit the admission of consumptives to this country.

Distribution of Life in Australasia.

In the course of a lecture entitled "The Distribution of Life in Australasia," delivered before the Royal Society of New South Wales last month, Mr. Charles Hedley, of the Australian Museum, pointed out that the similarity between animals and plants found in the south of the three continents—Australia, South Africa, and South America—strongly suggested the hypothesis that at one time there existed a bond of union between these continents. His theory was that at one time they were all connected with the great Antarctic continent, the ice cap of the earth at that time being in a different position to where it is now, otherwise animal or vegetable life could not have been interchanged, recent discoveries showing that a sort of silver-fish and moss were the only life outside seals and penguins to be found in Antarctica. Although the notion had been generally accepted that Fiji, on the east of the Australian coast, was an island thrown up out of the sea, the similarity of snails found in New Zealand and that place suggested to him that the two places at one time formed part of a continental area extending much further north. This theory had been substantiated by recent discoveries of rocks in Fiji, which were strictly of continental origin. Australia, too, had at one time been connected with the large islands at the north-east, Torres Strait being very shallow. This connection was proved by the wild banana and wild orange being common to the east coast of Queensland and these islands, while the characteristic Australian gum trees were met with in the islands. Australia had also given some of these places the wonderful tree kangaroo, which was like a monkey, and travelled from treetop to treetop for great distances. There were 800 different varieties of birds in Australia. Of the 100 varieties of snakes, two-thirds were venomous, seven being deadly, while the rest were as harmless as the sting of a bee.

Inspector-General of Lunatic Asylums in Victoria.

The position of Inspector-General of Lunatic Asylums in Victoria is still vacant. We understand that the Victorian Government, having failed to attract some of the medical men in this State by the offer of a salary of £1500 per year with a tenancy of five years, have advertised for applicants all over the world. In response to these advertisements some 30 applications have been received from medical men resident in Great Britain, America, Egypt, and Australasia. These applications are now being considered, and it is expected that an appointment will shortly be made by the Victorian Cabinet.

Professor Koch and Tuberculosis.

According to a cablegram in the *Sydney Morning Herald*, Professor Koch was interviewed on the subject of the recent report of the British Royal Commission on Tuberculosis, and he is said to have admitted his mistake, and believes now that man can be infected by bovine tuberculosis.

Cancer Research.

According to a cablegram in the lay press we learn that the English Cancer Research Committee has presented an interim report on the occurrence of cancer. We know that the committee have been attacking the question from the biological side, and we are now informed that the committee does not consider the disease infectious—in other words, that it does not depend upon an organism—that it occurs in all classes of vertebrates, and that it is not transmissible from one species to another. A further interesting item in the report is that in their opinion cancer is not increasing. This report, so far, is confirmatory of the general trend of opinion amongst pathologists in the last few years.

Lodge Practitioners' Defence Fund.

At the last meeting of the Council of the New South Wales Branch of the British Medical Association, it was agreed to pay over from this fund £50 to each of two of the late medical officers of the Balmain United Friendly Societies' Dispensary, who had resigned their positions at the request of the Council. Our readers should take notice of this fact and see the importance of contributing to this fund, especially as we understand several medical men who promised to contribute have failed to do so. It is important that this fund should be placed upon a firm basis.

BRITISH MEDICAL ASSOCIATION NEWS.

PROCEEDINGS OF AUSTRALASIAN BRANCHES.

New South Wales.

THE general monthly meeting of this Branch was held at the Royal Society's Rooms, Sydney, on Friday, June 24th, at 8.15 p.m. In the absence of the President and Vice-President, the chair was taken by Dr. G. E. Rennie, and there were 40 members and visitors present. The minutes of the previous meeting were read and confirmed. The acting Hon. Secretary (Dr. G. H. Abbott) read a letter from Dr. C. A. Mueller explaining the circumstances under which he had met Dr. Cortis, of Balmain, in consultation.

The **CHAIRMAN** declared the following new members elected :—Dr. Eames, H.M.S. "Torch"; Dr. A. C. Macarthur, Grafton; Dr. A. G. Corbin, Sydney; Dr. L. W. Roberts, Cowra; Dr. J. S. Gutheridge, Braidwood; Dr. Rees F. Llewellyn, Braidwood.

The following gentlemen were nominated for membership :—Dr. C. S. Bowker, Dungog; Dr. St. J. Dansey, Royal Prince Alfred Hospital; Dr. Newton, Tenterfield.

Dr. W. J. S. **MCKAY** gave a demonstration on "Alexander's Operation on the Round Ligaments of the Uterus. (See page 327.)

Dr. **SANDES** said Alexander's operation was looked upon as a small and comparatively unimportant one, but one could realise the importance of it after hearing Dr. McKay's demonstration. It appeared to him that Dr. McKay had somewhat laboured the point of the difficulty of finding the ligaments. As regards the various steps of the operation and the practice of separating adhesions, he thought Dr. McKay was to be thanked for bringing under their notice this method of procedure, and so saving some of the dangers of abdominal section.

Dr. **TAYLOR YOUNG** said that Dr. McKay always introduced his subjects well and explained them graphically. Alexander's operation, like any other, was suitable for only certain classes of cases. Dr. McKay had placed these well before them. He was interested in the application of the operation to cases in which it was impossible to be certain of adhesions. They were all liable to make mistakes, and sometimes Alexander's operation had failed, because the uterus was bound down by adhesions. Dr. McKay suggested the separation of the adhesions in that case—a method of procedure which an American operator had pursued for some years. Personally, he would be inclined, if in doubt about adhesions, to do colporrhaphy, separate the adhesions, and then proceed to shorten the ligaments. He thought there were very few patients in which the operation could be performed through a half-inch incision. Kocher always advocated the slitting up of the canal the whole length, because of the difficulty of finding ligaments. After opening up the canal in this way, it was much easier to proceed with the various steps of the operation. He was pleased to find that Dr. McKay had come round to adopt Alexander's operation, as he knew that formerly he had been opposed to it.

Dr. **STEER BOWKER** said he had not heard the whole of Dr. McKay's paper, but he considered it a bad plan to break down adhesions in the abdominal cavity without being able to see what one was doing. He had hoped to hear one of the gynæcologists present refer to the Alexander operation as modified by Abbe, in which he opens the inguinal canal and then stitches it together, using the ligament itself as a suture, thus avoiding the dragging on the inguinal canal, as happens in the ordinary Alexander. He had had occasion to open the belly, the other day, of a woman who complained of pain just before her menstrual period. She had had an Alexander done on her two years ago. The uterus was anteverted, and instead of the tube with the ovary forming the free border of the broad ligament, this was formed by the tightened round ligament, and the ovary was thrown back on the posterior surface of the broad ligament. In this position a tender and congested ovary in the erect position could hardly escape pressure between the abdominal contents and the broad ligament, and would, no doubt, account for the pain often complained of. Another case he had occasion to open was a woman upon whom a good gynæcologist had done a ventro-suspension. There was absolutely no sign of any adhesion left. He was reading the other day an operation for shortening, extra-peritoneally, the round ligaments, which struck one as being the best of these operations, advocated by Dr. Noble, an American, by means of which one could examine the abdominal contents, see what one was doing whilst breaking down adhesions, and which did not make any traction on the internal ring, and left no visible cicatrix nor any tendency to hernia. He makes a transverse incision a little above the symphysis (covered by hair) extending from the external border of the rectus on one side to that on the other through skin fascia and rectal sheath, then separates the recti and opens the peritoneum in the median line, attends to any existing adhesions, then seizes with a pair of forceps an intra-peritoneal portion of the round ligament on one side, and makes traction on it to make it tense, and loosens the peritoneum from the region of the internal ring. Now with some blunt instrument he makes an opening through the tissues at the outer border of the rectus, *not entering the peritoneum*, inserts his finger into this opening and hooks it round the extra-peritoneal portion of ligament (which is rendered easy to find by drawing on the forceps fastened to the intra-peritoneal portion), and draws the ligament through this opening over the border of rectus and across the front of the rectus to the middle line. This portion of the ligament is now fixed by a pair of forceps, the intra-abdominal forceps shifted to the ligament of the other side, and that ligament treated in the same manner. The peritoneum is now closed and the ligaments fastened to each other in the middle line, which leaves the ligaments crossing the rectus on either side. The rectal sheath is now stitched up with chromic gut over the ligaments, the needle taking an occasional stitch through the ligament and fixing it more firmly. The skin incision is now closed.

Dr. **WORRALL** said he had had an experience of Alexander's operation extending over nearly 25 years, having assisted Dr. Alexander at some of his first operations. He had introduced the operation into New South Wales. Dr. Foreman, knowing of his association with Dr. Alexander, had kindly asked him to assist him at the first operation performed in the colony, and, he thought, in Australia. The operation was designed for cases of movable retro-displacement as a substitute for the pessary. At his presidential address at the Hobart Medical Congress he had referred to the pessary as having been "passed on the road." He regretted to note that some practitioners still used these instruments, which was surprising, as even a slight acquaintance with the bacteriology of the vagina should convince anyone that the vaginal bacteria quickly becomes pathogenic when there is the interference with normal drainage which must result from the presence of a foreign body. It followed, therefore, that sooner or later a pessary produced greater evils than those it was meant to cure. There was another great disadvantage from its use, arising from the necessity for periodic visits to a doctor which treatment by pessary involved. This, besides being expensive, tended to engender an introspective habit. With regard to the method of performing the operation, as in all other surgical procedures, the method which was simplest, which inflicted least traumatism, and interfered least with the vessels and nerves was the best. He had tried several of the modifications, but had always gone back to the original Alexander's operation. The justification for this operation lay in the fact that as the peritoneal cavity was not opened, unless there had been some radical error in technique, the mortality rate was nil. He could not agree that the plan of opening the peritoneal cavity and separating adhesions through the internal abdominal ring "did away with many of the disadvantages of abdominal section." On the contrary, it enormously increased them. Instead of one abdominal section through comparatively unimportant structures, there would be two, and in a dangerous and most important region. He thought most surgeons would agree with him that the inguinal canal was not a region into which to enter with a light heart. If there were adhesions, it was infinitely preferable to make the usual abdominal section, by which the full extent of the mischief would be exposed to sight and touch and rectified in the most conservative manner, the displacement being corrected by a ventro-suspension.

Dr. **Sydney Jones**, jun., asked Dr. McKay if he used a pessary to support the uterus after operation? Recently he had seen two surgeons perform Alexander's operation. The one had used a pessary, the other had not. He thought the results were equally good in both cases.

Dr. **McKay**, in reply tn Dr. Taylor Young's remarks, said that he did not think they could break down adhesions as well from below as from above, although he admitted that vaginal section was a proper method of dealing with them. He did not mean to imply that he always did the operation through a half-inch incision; he sometimes needed to make a three inch incision. He was familiar with the operation described by Dr. Bowker, and considered it a good operation where there was much prolapse of the uterus, but did not consider it a suitable one during the child-bearing period. Some cases of intestinal obstruction had occurred after it, and he thought the incision through the aponeurosis of the rectus would weaken the abdominal wall. *Apropos* of Dr. Worrall's remarks, Alexander did not open the inguinal canal at all, but sought the ligament at the external ring; moreover, the ligaments were often frayed out at this situation, and difficult to find, and he did not see any particular advantages to be derived from this method of procedure. He did not use a pessary after operation, but usually inserted a piece of gauze to support the uterus for 24 or 48 hours, and he thought this support did good. The utero-sacral ligament had been stretched, and this support of the uterus enabled them to contract again.

Dr. **Furnival** read some "Notes on a Case of Cystic Dilatation of the Lower End of the Ureter" (to appear in a future issue). Dr. **Skipton Stacy** read an account of the pathological condition of the part removed by Dr. **Furnival**.

Dr. **Hinder** said examination with the cystoscope showed a smooth nodular irregularity surrounding what proved to be the orifice of the ureter, inasmuch as clear urine could be seen puffed out every few seconds. The rest of the bladder wall was absolutely normal. Apparently the ligature of the ureter, if it were complete, was not sufficient to destroy the renal function; still, they were not positive that the ligature did produce a complete obliteration for any length of time.

Dr. **Macdonald Gill** read a paper on "A Case of Glioma of the Spinal Cord"—(see page 339)—and exhibited some sections and micro-photographs.

Dr. **Arthur Palmer** showed the following specimens:—(1) A large left kidney with three ureters. These united at the brim of the bony pelvis, and opened into the bladder by a single orifice. Each ureter did not drain the whole of its own pelvis, as the lowest received, close to the kidney, a large branch from the middle pelvis. (2) A horseshoe kidney. The crosspiece was at the lower poles. The right half was hydro-nephrotic and its lower lobe received a large branch of artery from the right common iliac. Dr. **Palmer** also reported a case of congenital absence of left kidney and ureter in an infant dying soon after birth from asphyxia. Both suprarenal capsules were present and of normal appearance.

COUNCIL MEETING.

The Council met at the Association Rooms on Friday, July 8th, 1904. Present: Dr. MacCormick (president) and six members.

The minutes of the previous meeting were read and confirmed.

The following new members were elected:—Drs. C. S. Bowker, Dungog; W. T. J. Newton, Tenterfield; St. J. Dansey, Royal Prince Alfred Hospital.

Resolved—"That a special meeting of the Branch should be held on September 2nd to consider the resolution passed by the Western Medical Association *re* the admission of patients from the country to the general hospitals in Sydney." (See Australasian Medical Gazette, June, page 299.)

It was agreed that the president should authorise the trustees of the Lodge Practitioners' Defence Fund to pay the sum of £50 to each of two members who at the suggestion of the Council resigned their connection with the Balmain Friendly Societies' Dispensary.

A letter was received from Armidale, stating that Dr. T. B. Clune, late of Drummoyne, Sydney, had been appointed medical officer to the Friendly Societies in Armidale.

Resolved—"That a certain member who had failed to comply with the request of the Council to resign a position as medical officer to an objectionable society should be expelled."

Victoria.

A meeting of the Victorian Branch of the British Medical Association was held at the rooms, Collins-street, on June 15th. Dr. Weigall (president) occupied the chair.

Dr. **Henry** drew attention to the meeting that had been held at the Women's Hospital between the hon. staff and the committee to consider the present system of admitting patients. He (Dr. Henry) stated it was found that according to the Act all people were eligible for attendance instead of the admissions being confined to the sick poor.

Dr. **Cuscaden**, one of the honorary staff of Women's Hospital, gave a *resume* of the meeting. He said that it was well known that numbers of people who were well able to pay for outside medical attendance gained admission to all the hospitals, and it was decided that in future all cases would require to get recommendations from suburban practitioners.

Dr. M. V. **O'Sullivan** had proposed that Listerian homes should be provided in all the suburbs. The necessity of an alteration in the Act was also spoken about.

Dr. **Weigall** expressed himself in favour of Listerian homes, and stated that they would be a preventive to the overcrowding of the public institutions. He thought that a complete stop ought to be put to the payment of public hospitals by patients.

Dr. **Black** thought that these Listerian homes would be an unfair competition to the private hospitals, and thought that at present the private hospitals in the suburbs answered all the purposes of Listerian homes.

Dr. **Henry** moved—"This meeting urges upon the Board of Health the desirability of introducing legislation with a view of enforcing a discontinuance of the present reprehensible system of delivering milk to the consumer from open cans." Dr. Henry gave his reasons for this motion, and dwelt particularly on the slipshod way the milk was delivered by the dairymen, and that the only way to avoid the present contamination of milk by bacteria, and to thus avoid the usual summer epidemics of infantile intestinal disorders, was by some drastic movement such as he had indicated.

Dr. **Weigall** said that it would be a great boon if some proper method of distributing the milk could be enforced, and drew attention to the fact that in Denmark not half a pint of milk could be sold unless pasteurised.

The motion was seconded by Dr. **Joske**, and carried unanimously.

Dr. **Joske** read notes on "Two Cases of Macrocephaly." (See page 342).

Dr. **Cuscaden** related a case he had seen in Port Melbourne, but could not remember measurements of the head. The boy was about 11 years old and had an enormous head. He was able to get about, but dragged one leg slightly.

The **President** thought Dr. Godfrey's post-mortem, showing the absorption of the brain and obliteration of the sutures, was very interesting. He thought it was a pity that no further knowledge had been obtained of late as to the treatment of such cases.

Dr. **Fox** remembered a case he had tapped through the anterior fontanelle, and then had strapped the head. The child appeared to be relieved for a little time, but died a couple of months after.

Dr. **Bryant** related a case of hydrocephalic monster that he had to tap in order to deliver the mother from her burden.

Dr. **Vance** read notes on two cases of joint trouble following follicular tonsillitis.

Dr. **Weigall** considered sepsis a most interesting subject, and it occurred in all sorts of unexpected ways. He had seen mastoid abscess from tonsillar trouble without any ear mischief. He would like to ask if it were possible for a joint acutely inflamed during the course of a septic case to clear up and recover without suppuration? He thought it was, and cited a case of a female with a foul discharge from the uterus developing a bad elbow, which cleared up, and afterwards pelvic cellulitis occurred. He thought it was impossible for this elbow joint not to have been septic. These two cases described by Dr. Vance were undoubtedly septic, arising from the tonsils probably, and yet one joint cleared up and the other did not. He would like to ask Dr. Vance if the same cause was at work in both cases, and if they lived near to one another?

Dr. **Cuscaden** agreed with Dr. Weigall, and stated that he had frequently seen after confinements joints undoubedly septic clear up.

Dr. **Bryant** had been unfortunate in having a case very similar to Dr. Vance's in its inception, viz., from the tonsils, which terminated in complete destruction of the hip-joint and bursting of the capsule within a fortnight of the start of the disease. Excision of the hip-joint was performed below the great trochanter, and the edges of the acetabulum were eroded, the ligamentum series destroyed, and the head of the bones riddled with holes. His experience of septic joints had not been so satisfactory as other members.

Dr. **Joske** had no hesitation in saying that septic joints do clear up.

Dr. **Fox** had seen septic joints clear up, and referred to those cases of gonorrhœal infection which were undoubtedly septic, and very rarely suppurated. Cases had been recorded of children with gonorrhœal ophthalmia developing inflammation in the knees and ankles.

Dr. **Vance**, in reply to the president's question, stated that influenza was the cause in both cases, and that they lived about three miles apart.

Ballarat.

The ordinary bi-monthly meeting was held at the Ballarat Hospital at 8.30 p.m. on May 26th, 1904.

Present:—President (Dr. J. T. Mitchell), and ten members.

Apologies: Drs. Jordan, McGowan, Nisbet, Sloss.

Minutes of previous meeting read and confirmed.

Correspondence from Ethical Committee of B.M.A., Victorian Association for Prevention and Cure of Tuberculosis, Dr. Nisbet, Medical Defence Association, Union Bank.

Drs. R. **Scott** and **Affleck Scott** moved—"That the president and secretary represent this Branch on the deputation to the Minister for Mines, arranged by the the V.A.P.C.T." Carried.

Drs. **Morrison** and **Lidwell** moved—"That a copy of the M.D.A. letter be sent to Dr. Nisbet, and he be asked to try and connect 'Bonesetter' with advertisement mentioned, and Superintendent of Police be seen with view to starting a prosecution." Carried.

Drs. **Morrison** and **Usher** moved—'That present account with Union Bank be closed and a new one opened." Carried.

Drs. **Affleck Scott** and **Champion** moved—"That the deposit receipt be transferred to the trustees of the Branch when it matures." Carried.

Dr. **Hardy** read his paper on "Sarcoma of the Superior Maxilla," and showed photographs of patient before and after operation. Hæmorrhage had been very troublesome at the operation.

The **President** congratulated Dr. Hardy on the result of his case. Specimen was exhibited.

Dr. **Morrison** read his paper on "An Unusual Case of Pneumothorax due to a Hydatid of the Lung." The specimen was shown, and a daughter cyst was seen to be lying immediately over the rupture, and had apparently acted like a ball valve. The air in the thorax was under considerable pressure, for on opening the chest post-mortem it escaped with a loud hissing noise. The hydatid was suppurating.

In the discussion which followed it was mentioned that two cases of hydatid of the lung which had been in the hospital lately had been examined by the X-ray screen, and the cyst was clearly demonstrated.

The following exhibits were also shown:—

(*a*) Three prostate glands removed by Dr. R. Scott. (*b*) Paröophorotic cyst ruptured, showing papillomata all over peritoneum, and in places having undergone carcinomatous change. (*c*) Tubercular dactylitis. (*d*) Carcinoma of uterus.—*Dr. Mitchell.* (*e*) Hypertrophied heart, with ante-mortem clot in left ventricle, and portion of abdominal aorta from same case, showing two aneurismal dilatations with clot extending down into left common iliac artery, which was almost completely occluded.—*Dr. Gardiner.*

Queensland.

A GENERAL meeting of the Branch was held on Friday, July 1st.

Drs. Millais Culpin (Brisbane) and Perkins (Howard) were elected members of the Branch.

Dr. Baxter Tyrie was appointed curator of the Museum and Library, in succession to Dr. O'Brien.

It was resolved to accept the invitation of the Toowoomba members to meet in Toowoomba in October.

Dr. TURNER read a paper on "Early Operation in Typhoid Perforation." (See page 334).

South Australia.

THE twenty-fifth annual meeting was held at the Adelaide University on June 30th, 1904. The retiring president (Dr. M. Jay) took the chair, and over 30 members were present.

The following members having been nominated were all elected:—Hon. treasurer, Dr. W. T. Hayward; hon. secretary, Dr. J. B. Gunson; ordinary members of Council (3), Drs. Cudmore, Lendon and Sangster, sen., the retiring president being a member *ex officio;* Parliamentary bills committee re-elected; local editor of AUSTRALASIAN MEDICAL GAZETTE, Dr. H S. Newland, re-elected; hon. auditor, Dr. A. E. Wigg, re-elected.

Dr. M. JAY then delivered his presidential address. (See page 319).

The incoming president (Dr. C. W. Hamilton) then took the chair, and votes of thanks to retiring officers and to the Council of the University were carried.

Twenty-fifth annual report of the Council, June, 1904, was adopted as follows:—

Your Council offers its congratulations to members on the strong position of the Branch at the completion of this the twenty-fifth year of its existence. Our funds remain in a satisfactory condition, our meetings have been all well attended, and a strong *esprit de corps* permeates the entire Branch. Several of our old members at present in England are being consulted, in conjunction with other colonial members, by the Reorganisation Sub-committee of the Association. It will be proposed at this annual meeting to alter Branch Rule No. 11, so that the annual re ort and balance-sheet shall for the future be made to cover each year from January to December instead of as at present, and thus coincide with the currency of subscriptions with payments to the medical periodicals, and with the date when such reports must be sent by the Branch to the Council of the Association. Your Council is gratified at the response to their appeal on behalf of the Medical Benevolent Association of South Australia, and again urges those members who have not subscribed to now do so. Several members have permanently left the State, and one (Dr. Shand) has died, but the new members elected have balanced our loss in numbers. As in past years, our thanks are due to the University for the use of rooms for our meetings. One special meeting was summoned during the year.

The following papers have been read during the year:—Dr. Jay, "Macroglossia"; Dr. Todd, "Umbilical Hernia"; Dr. W. A. Giles, "Prostatectomy"; Dr. Gault, "Pneumothorax"; Dr. W. T. Hayward, "Pneumothorax"; Dr. A. A. Hamilton, "Chronic Ascites"; Dr. Marten, "Gastric Surgery"; Dr. Lendon, "Icterus Neonatorum"; Dr. H. Newland, "Case of Aneurism"; Dr. Gault, "Acute Rheumatism and Chorea"; Dr. E. E. Moule, "Acute Rheumatism"; Dr. Swift, "Some Rheumatic Affections"; Dr. Hone, "Heart Disease and Pregnancy"; Dr. J. A. G. Hamilton, "Pregnancy with Fibroid"; Dr. Poulton, "Bullet Wound in Abdomen"; Dr. J. C. Verco and Dr. Poulton, "Hydatid of Brain"; Dr. W. A. Verco, "Gunshot Wound of Abdomen"; Dr. Poulton, "Bullet Wound of Aorta."

The balance-sheet was also adopted as follows (in the absence of the hon. auditor it was examined by the president):—

STATEMENT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDING JUNE 30TH, 1904.

DR.	£	s.	d.
To Balance in Bank, June, 1903 ..	273	4	4
„ Interest	6	3	5
„ Capitation grant from parent association	1	2	0
„ Subscriptions	251	3	0
	£531	12	9

CR.	£	s.	d.
By subscription to B.M.A.	126	0	0
„ „ A.M.G.	96	0	0
„ Exchange	1	13	9
„ Printing and stationery	13	5	0
„ Clerical assistance and postage ..	9	15	6
„ Gas	1	1	0
„ Gratuities to porters	1	10	0
„ Balance in Bank	282	7	6
	£531	12	9

ASSETS.	£	s.	d.
Balance in hand	282	7	6
Outstanding subscriptions	39	18	0
	£322	5	6

LIABILITIES.	£	s.	d.
Subscription to B.M.A.	129	3	0
„ A.M.G.	18	0	0
Expenses for ensuing half-year (estimated)	18	0	0
	£157	3	0

W. T. HAYWARD, Hon. Treasurer.

REPORTS OF OTHER SOCIETIES.

THE BORDER MEDICAL ASSOCIATION.

The last meeting of the Border Medical Association was held at Wangarratta on June 21st.

There were present: Drs. Andrews (chair), Kennedy, Marlienckrostt (Albury), Coane (Beechworth), Altmann (Bright), McSweeny (Milawa), Schlink (Wodonga), Boyes and Henderson (Wangaratta), Harkin (Chiltern), Shortt, Walch and Lang (Corowa).

Dr. **Harkin** read a paper on the "Treatment of Post-Nasal Polypi," and Drs. Andrews, Coane, Kennedy, Schlink and Walch took part in the discussion which followed.

Dr. **Coane** then read a paper on the "Use and Abuse of Ergot in Midwifery," and Drs. Andrews, Kennedy, Henderson, Harkin and Lang spoke on the subject.

A paper had been promised by Dr. Cleaver-Woods (Albury) on "Infantile Paralysis," but he was unable to be present, and a discussion on that disease was started by Dr. **Andrews**, in which Drs. Altmann, Schlink, Marlienckrosst, Kennedy, Coane, and Lang took part.

The next meeting of the Association will be held at Wangarratta in the first week in September.

THE BATTLE OF THE CLUBS.

Armidale.

It will be remembered that a short time back the various medical men in Armidale endeavoured to induce the lodges to make certain concessions and to alter the terms of their agreements so as to fall somewhat in line with the agreement arrived at between the friendly societies and the medical men in Inverell. Unfortunately, the lodges failed to see that it was to their interest to have an amended agreement, and declined to accede to the requests of the medical officers. They then advertised for a medical officer, and Dr. T. B. Clune, who has been medical officer to the People's Prudential Society in Sydney, has been appointed medical officer to the friendly societies' lodges in Armidale. A festive gathering of the representatives of the different benefit societies was held to welcome Dr. Clune. One of the representatives, speaking to the toast of the "Health of Dr. Clune," said it gave him great pleasure to see the five lodges united in selecting one doctor, and he thought the action would further tend to cement the friendship that always existed among the local societies. Similar statements were made by other delegates, and we regret that the members of these lodges are so blinded to their own interests, and have adopted so short-sighted a policy, as to fly in the face of the local medical men. We think that before long they will have cause to regret the action they have taken, for that has been the experience of all other friendly societies who have acted in a similar manner in defiance of the medical profession.

A Warning from New Zealand.

In our February issue we referred to lodge matters at Rotorua, New Zealand, and warned medical men from applying for the position of lodge surgeon to the Loyal Rotorua Lodge, M.U.I.O.O.F. We learn that at a meeting of the members of this lodge held last month a report was received from a sub-committee appointed to consider the question of the appointment of a medical officer for the lodge, and, in accordance with their suggestion, it was resolved to advertise in the papers in the principal towns in New Zealand and also in the *Sydney Morning Herald* for a duly qualified medical man to fill the position. The lodge was reported to be making great strides, and members feel they are justified in guaranteeing a medical man a substantial amount annually as their medical officer. We hope that the efforts of this lodge to appoint a medical officer under these circumstances will not be successful, and that any medical man who may contemplate applying for this position will take warning, and think twice before he takes any decisive step in this direction.

OBITUARY.

Augustus Henry Macmanus, L.F.P.S. (Glas.), 1863, L.M. Coombe Hospital, Dublin, 1862, Camperdown, Victoria.

We regret to record the death of Dr. A. H. Macmanus, one of the oldest residents of Camperdown, which took place on June 22nd, 1904, in his 63rd year. The deceased gentleman had lived in Camperdown for close on 30 years. He was born at Bray, near Dublin, and came to Australia when a young man. A few years ago he retired from active practice.

Michael Paul Williams, M.D., Ch.M., R.U.I., 1886; L. Mid. K.Q.C.P. (Irel.), 1886, of Uralla, New South Wales,

Died suddenly on June 16th, 1904. He had been in failing health for some time.

Thomas Baynton, M.R.C.S. (Eng.), L.S.A. (Lond.),

Died at his residence at Ashfield, Sydney, on June 16th, 1904. He was the eldest son of the late Dr. T. Baynton, one of the pioneer squatters of Victoria. The deceased arrived in Victoria in the year 1840, and was for a time engaged in pastoral pursuits in West Australia. When his father died the son inherited Darlington Station, Victoria. Thirty years ago he settled in Sydney, and followed the practice of his profession in Macquarie-street. Subsequently he retired, and of late he resided at Ashfield. Mrs. Baynton survives him.

Edward Menzies, M.R.C.S. (Eng.), 1841, Napier, N.Z.

We regret to record the death of Dr. Edward Menzies, of Napier, N.Z., at the age of 84. Deceased went all through the Crimean war, and retired on pension from the army in 1872 with the rank of Inspector-General of Army Hospitals. Shortly after goint to Napier he was appointed resident surgeon at the hospital, from which position he retired in 1896 owing to advanced age.

Registration of Midwives in New Zealand.—A bill providing for the training and registration of midwives and the establishment of a State Maternity Home has been read a second time in the New Zealand Parliament, and the proposals therein contained have met with the general approval of the House.

REVIEW OF CURRENT MEDICAL LITERATURE.

OBSTETRICS AND GYNÆCOLOGY.

Rupture of the Symphysis.

Kayser (*Archiv. fur Gynækol.*, 1903, Bd. lxx., Heft 1). In 30,000 labours in Shanta's and 64,149 in Chrobak's kliniks this accident occurred three times. It did not occur in 42,040 cases under Gusserow, and since the year 1876 it has not been observed by Ahlfeld. About 130 cases have been described. The writer describes a case which has at length occurred in Gusserow's klinik. The patient was a primipara, 26 years old; when she sent for a doctor she had been in labour 48 hours, and the membranes had been ruptured 37 hours. Inter-spinous diameter, 25 cm.; inter-cristal, 28 cm.; inter-trochanteric, 31 cm.; external conjugate, 20 cm. During the examination the fœtal heart-rate fell from 170 to 70 per minute, and a quantity of meconium escaped. The anterior fontanelle was lower than the posterior, and was on the right and anterior. The doctor therefore proceeded to deliver the child with axis-traction forceps. When traction was applied a cracking sound was clearly heard. Delivery was completed after considerable difficulty. The child was mature, and the circumference of its head was 36 cm. There was a large vaginal tear and a diastasis of the symphysis. The patient when admitted to hospital could not move her legs. Passive movement caused severe pelvic pain. The legs lay rotated outward, abducted and slightly bent at the knees. The vagina was transversely torn above the urethra, the breadth of the wound being 3½ cm. After removing blood-clot the ends of the pubic bones were felt 3 cm. apart. The patient was able to pass water. With difficulty the urethra, which was retracted into the wound, was catheterised, and it was then attached to the anterior vaginal wall, the wound being lightly packed with iodoform gauze. Attempts were made to secure apposition of the separated structures by means of plaster bandages. These failed, and the parts having been exposed four silver-wire sutures were inserted. The operation wound was closed, the cave of Retzius being drained by a rubber tube for 14 days. A plaster bandage was again applied, and was kept on for some time, the patient not being allowed to walk for five weeks. Seven months later two silver stitches were removed, as they had worked through the fascia and were causing pricking sensations. There was no trouble in urination. The patient walked perfectly well, and was free from pain and fit for work.

On the Co-Existence of Carcinoma and Tubercle of the Uterus.

Wallart, J. (*Zeitsch. fur Geburts. and Gynak.*, Bd. 1., Ht. 2). The author has made an extensive research into the literature of this subject, and critically examines a large number of observations; he then relates at length two cases which have already been referred to in the second edition of Kaufmann's text-book on special pathological anatomy. In one of these (case 2, p. 249) there was a carcinoma developed from the cervical glands, and at the same time a secondary tuberculosis extending from the peritoneum to the tubes and uterus, following upon a primary pulmonary tuberculosis; the cervix was also invaded by tubercle. In case 3, p. 265, at the *autopsy* on a woman, aged 37, who died of chronic phthisis and tuberculous meningitis, an adeno-carcinoma had invaded the whole postio and cervix; in the body of the uterus was found a circumscribed caseous thickening of the mucous membrane, proved microscopically to be tuberculosis. Wallart thinks that the occurrence of carcinoma and tubercle in the uterus is not so rare as hitherto been supposed; the relation of the two affections to each other is probably different in different cases. In the first case just related the chronic progressive tuberculosis probably was a predisposing cause for the development of cancer. In the other case the concurrence was most likely accidental; the tubercle of the body appeared to be of more recent date than the cervical cancer, and was apparently a secondary process of the same age and duration as the tubercle of the meninges, which was also present.

Primitive Permanent Amenorrhœa in a Multipara.

Soli (T.), *La Clinica Obstetrica*, June-July, 1903, p. 249. The writer reports the case of a countrywoman, aged 34, who had never menstruated, but had given birth to several children. Her father died of heart disease, her mother of puerperal fever. She had one brother alive and healthy, but no sisters. She had not had any of the exanthemata of childhood, nor was she trachitic. She had never menstruated nor felt any of the symptoms that precede, accompany, or follow the catamenia. When 15 years of age she had broncho-pneumonia and hæmoptysis, which was thought to be possibly vicarious menstruation. She was treated with ergot and iron for two months, and there was no further bleeding. At the presumptive period for puberty she had no general symptoms such as usually mark that epoch; there were no menstrual molimina, no leucorrhœa or vicarious hæmorrhage. At 22 she married, and in about nine months gave birth to a living and healthy male child. Her pregnancy parturition and puerperium were all normal. Pregnancy followed pregnancy with intervals of from nine to 14 months between each birth. She suckled each child for the usual period. Of seven children, four were still alive and healthy, three having died in infancy from the ordinary diseases of childhood. The writer first saw her in July, 1902. She was then about five months pregnant, and had come to hospital because for about a month the abdomen had become very rapidly distended in an unusual way. On examination she was found to be a well-developed woman, with no evidence of bone disease. The pleura, lungs, abdominal organs, kidneys, and heart were all normal, as was also the blood, both as regards the number of its corpuscles and its richness in hæmoglobin. The thyroid was slightly enlarged, but her voice was normal in strength and pitch. The breasts were well developed, the abdomen was globular, and the epigastric fossa was obliterated. On palpation there was a uniform sense of resistance, and fluctuation was very distinct. No fœtal parts could be felt, nor could the fœtal heart be heard. The uterus was as large as at the eighth month. The external genitals were of normal development. On vaginal examination the fornices were felt bulging, but not excessively; the cervix uteri was soft; strong pulsation was perceptible in the vagina, and ballottenent could be felt. The pelvis was normal. The abdomen continued to enlarge rapidly, and it became apparent that the case was one of acute hydramnios. It was decided to induce labour. Twins were extracted. There were two sacs. In one the liquor amnii was very scanty; from the other over eight litres of fluid escaped. Both children were alive when born, but died in a few minutes. There was a single placenta, with several white infarcts on the maternal surface. There was one chorion, but two *amnia*. The puerperium was normal. There were two cords—one implanted centrally and the other at the margin of the placenta. Sixty days after parturition the writer had an opportunity of examining the patient again. He found the uterus, tubes, and ovaries were of normal development. Hippocrates, Pliny, Cuvier and authorities in all ages have held that a woman who has never menstruated cannot conceive. In 1586, Marcellus Donatus recorded two cases of pregnancy in women who had never menstruated. Some years later, Joubert, Stark and Themmen reported analogous cases, and since that time several authenticated cases have been put on record, though the condition is undoubtedly of great rarity.

Tuberculosis of the Urinary System in Women.—Report of 35 Cases.

Hunner (Guy L.), *Bulletin of the Johns Hopkins Hospital*, January, 1904, vol. xv., No. 154. This paper deals chiefly with diagnosis. *Age.*—The disease is one of young adults; average age, 31½ years. *Family history.*—In 13 out of 28 cases a family history of tuberculosis was obtained. *Past history.*—There may be a possible manifestation of tuberculosis in other organs, or a history of diseases which have left kidney lesions as *loci minoris resistentiæ* for a later attack by the tubercle bacillus. *Clinical history.*—The extremes of existence of the symptoms are two months and 17 years, with an average of four years and a half. *Physical condition.*—The general condition varied very markedly. Some cases presented a picture of health with a high percentage of hæmoglobin; others were brought into hospital looking nearly dead. The two chief factors contributing to a desperate condition of the patient appeared to be—first, a diseased kidney which was not draining freely; and, second, irritation of the bladder disturbing the patient's rest at night. *Physical examination.*—Important indications are: tenderness of the kidney, tenderness and a desire to void urine on pressure on the ureter, which is often felt thickened as it crosses the brim (per vaginam); tender uterovesical region and a thickened ureter, which can nearly always be felt, beginning at its vesical junction just anterior to the cervix and coursing outward and backward. The patient may be kept in bed a week, the temperature noted, and the tuberculin test applied; and, lastly, the examination of the urine will give a positive diagnosis. Do not examine 20 or 30 slides a day, but two slides a day for a week or more, during which time there is likely to be a shower of bacilli from some freshly broken-down focus of the kidney disease. If the tubercle bacilli are not found, fresh urine may be centrifugalised and a small quantity injected into a guinea-pig's peritoneal cavity. If but one supply is available, inject several guinea-pigs, some abdominally, some cutaneously, as the colon bacillus, which is so often present in tuberculous urine, very often kills the animal. In 15 out of 22 cases tubercle bacilli were found. A diagnosis should be made without the cystoscope. This is an extremely valuable instrument, but there are many abuses in connection with its use, one of the most important being the catheterisation of supposed healthy kidneys through infected bladders. The author comes to the following conclusions:—1. Urinary tuberculosis in women is a disease of early adult life. 2. It is usually primary in the kidney, although about half the patients complained first of bladder symptoms. 3. It is confined to one side in the vast majority of cases. 4. The disease should be kept in mind in dealing with any symptoms referable to the urinary tract. 5. Appendicitis and gall-stone colic must be differentiated. Any obscure case of supposed malaria or typhoid fever should remind one of the disease. 6. The disease is compatible with a long life of comparative health, and in some cases there is a tendency to spontaneous healing.

The Bad Effects of Deep Incisions in the Cervix during subsequent Delivery.

Hoffmeir (*Münch. Med. Wochnschr.*, 1904, No. 3) Professor Hoffmeir records two cases in which serious consequences followed the adoption of incision of the cervix, as recommended by Dührssen, in a previous labour. In the first case four deep incisions had been made and delivery effected by forceps. In the present labour the cervix did not open, and had to be artificially dilated, first with sounds and the fingers, and then with Frommer's dilator. The child being dead, the head was perforated and delivery completed. In the second case the patient had two normal confinements after the one in which the cervix had been incised, but, at the fourth, died from an incomplete rupture of the uterus through the scar of the old incisions. The writer considers that the deep cervical incisions, and especially the lateral ones, are not as harmless as Dührssen would have us believe. In the second case the hæmorrhage at the time of the original incisions was so profuse that had not all the resources of the clinic been at hand she would undoubtedly have bled to death. In private practice the consequences would have been terrible. The effect of the incisions in the later confinements must make the value of this method very doubtful. In those cases where it cannot be avoided, it would appear best to incise the cervix anteriorly and posteriorly, so as to lessen the danger of dividing large vessels..

Paternal Alcoholism as a Cause of Inability to Suckle.

Bunge (*Virchow's Archiv.*, Band 175, Heft. 2, S. 185). Professor Bunge states that inability to suckle the infant for a full year, or even for nine months, is rapidly on the increase, and that in mid-Europe more than half the mothers are unable to perform this duty. He obtained statistical material by sending out question forms to his pupils in practice. The questions were numerous and detailed, but all referred to family history with regard (*a*) to the power of suckling, (*b*) to the consumption of alcohol, (*c*) to certain diseases, such as tubercle, in which inheritance plays a part. Bunge obtained 1629 histories. In families where both mother and daughter were capable of suckling their children, the daughter's father was a drunkard in 2.6 per cent. of cases; in families where both mother and daughter were incapable, the father was a drunkard in 19.1 per cent. of cases; in families where the mother was capable of suckling, the daughter incapable, the father was an immoderate drinker in 35.7 per cent. of cases, and a drunkard in 42.2 per cent. of cases. Associated with the loss of the power of suckling there is an increased liability to dental caries, to tuberculosis, to the psychoses and to nervous disease. Bunge's chief conclusion is that alcoholism in the father is the main cause of the loss of the power of suckling in his female descendants. He finds that when once the power of suckling is lost the descendants are most unlikely to recover it. The disability is transmitted to future generations. Bunge's questions were of rather a leading character, and probably an undue proportion of his cases show abnormality. The subject deserves further investigation, preferably in a large body of unselected cases in one of the outdoor maternity charities.

NEUROLOGY AND PSYCHIATRY.

Hereditary Spastic Paraplegia.

H. Campbell Thomson (*Brain*, Autumn, 1903) discusses this disease in its relation to Friedreich's disease, and records three cases. Under this term have been included cases which in many ways closely resembled those described by Friedreich, especially in their tendency to run in families, but on the other hand differed sharply from this group in the fact that their predominant features are those of a lateral rather than a posterior sclerosis. The cases described originally by Freidreich were characterised by ataxic symptoms, with loss of the deep reflexes, with an absence of disturbances of sensation and of oculo-pupillary anomalies and lightning pains, the disease generally beginning before the twentieth year, and showing a tendency to run in families. Club-foot and scoliosis are also constant features of this disease. From time to time, however, atypical cases have been described in which some variation from this clinical picture has occurred, especially in the exaggeration of the deep reflexes, with ankle clonus and the extensor response of the plantar reflex. Sanger Brown was one of the first to suggest that the term "Friedreich's disease" should be broadened to include the group of cases he described. Marie, however, later described his "heredo-ataxie cerebelleuse," and Sanger Brown's cases clearly belong to Marie's group rather than to Friedreich's. The chief points in the symptomatology of Marie's form of hereditary ataxy are as follow:—It begins usually after puberty, the tendon reflexes are increased, and ankle clonus is present; club-foot and scoliosis are absent. Sowewhat later Howard Tooth described four cases occurring in two families of children, presenting the symptoms of a true primary lateral sclerosis, comparable with the hereditary posterior sclerosis described by Friedreich. Drs. Gee and Weston Bayley have also described series of cases of this nature. Isolated cases of the same character have been described by several writers. The following are the cases described by the writer himself:—Case 1. A young man, aged 21 years, had for five years been troubled by his toes sticking up. In the left foot the four outer toes were in the hammer position, big toe normal. In the right foot the toes had also begun to assume the same position; no definite pes cavus. Both knee jerks increased, left more than the right; plantar reflexes brisk, flexor response. No nystagmus; no loss of sensation; no alteration in speech; slight inco-ordination in walking. Case 2.—A boy of 18 years had a sore on the left ankle and deformity of both feet. The sore had been present for many years, was evidently trophic in nature, and only recently had become painful. Well marked pes cavus of both feet; all the toes in the hammer position; knee jerks increased; both plantar reflexes extensor in type; no definite ataxy. No other members of the family affected. Case 3.—A man, aged 21 years, had two small but deep ulcers on the inner side of the sole of each foot. These had been present for six years, and would not heal. The knee jerks were exaggerated, and both plantar reflexes were extensor in type. The pupils were normal; no nystagmus, no anæsthesia, and no curvature of the spine. Right foot was in a position of equinovarus, and well marked pes cavus on the left. Case 4.—A boy, aged 10 years, complained of difficulty in walking, and was found to have marked pes cavus of the left foot, which had been coming on since the age of three years. Both knee jerks were exaggerated; left plantar reflex was extensor; right flexor in type. No loss of sensation; no nystagmus; no spinal curvature. No others in the family were affected. Case 5.—A man, aged 42 years, showed great deformity of the feet, which had been gradually progressing for more than 12 years. Knee jerks were greatly exaggerated. No other definite symptoms, and no others in the family affected. Thomson suggests that these cases, which at first sight are like Friedreich's disease, with exaggerated reflexes, are isolated instances of the family condition known as hereditary spastic paraplegia, and that they are in every way comparable to the isolated cases of Friedreich's disease, to which they are closely allied, but from which they differ chiefly in the predominance of the lateral over the posterior sclerosis.

Bony Sensibility.

P. C. Knapp (*Journal of Nervous and Mental Disease*, January, 1904) discusses the question of bony sensibility, which was described by Egger, an assistant of Dejerine. Egger found that if a tuning fork in vibration were placed upon any part of the body where the bones were near the surface, a peculiar feeling of thrill was perceived. This sensation is apparently not carried on by the vibrations of the bony structure, but by the intermediary of the nerves, and is not propagated to other parts of the bone unless very strong. Clinically the bony sense may be diminished by disease affecting all parts of the nervous system—injury to the peripheral nerves, tabes, syringomyelia, syphilitic spinal paralysis, cerebral hæmorrhage and hysteria. Diminution of bony sense does not seem to have any necessary connection with disturbances of other forms of sensibility. Bony anæsthesia often coincides with loss of tactile sensibility, yet the two do not necessarily go together. In tabes it often happens that tactile sensibility may be preserved, except perhaps in some small area, while there is extensive bony anæsthesia. There is no necessary relation between the bony sensibility and the other forms of deep sensibility. It seems, on the whole, therefore, that bony sensibility is an independent form of sensibility. The course of the fibres that convey this sensation is uncertain. The sensibility is conveyed by the peripheral nerves to the cord. Egger thinks that the fibres then ascend uncrossed in the grey matter. He has found bony anæsthesia on the same side as loss of muscular sense in Brown Sequard's paralysis, and he thinks that the existence of bony anæsthesia in syringomyelia indicates that the sensory tract is in the grey matter. The great variety of affections in which bony anæsthesia may occur makes the clinical significance rather slight. The chief significance of the symptom seems to be that it throws some new light upon the development of arthropathies and spontaneous fractures in tabes and syringomyelia, as showing the sensory condition of the bones and their insensibility to injury, and also as indicating that one more sensory factor must be taken into account in studying the physiology of co-ordination of movements.

OPHTHALMOLOGY.

The Mechanism of Accommodation.

Grossmann's investigations (published in the January number of the *Ophthalmic Review*) appeared to settle the general correctness of Helmholz's theory of accommodature, viz., that contraction of the ciliary muscle causes relaxation of the zonule of Zinn, and the lens becomes more convex invirtue of its own elasticity, and seemed to dispose of the rival theory of Tscherning, viz.., that the ciliary muscle by its contraction produces not a relaxation but a tightening of the zonule, whereby the lens become more convex about the centre, but flattened towards the periphery on both its anterior and posterior surfaces. Grossmann had the unique opportunity of studying the changes in the lenses of a patient with complete aniridia of both eyes, together with anterior and posterior polar cataracts, which gave ready-made "chalk marks" whereby he could observe and measure the movements of the two surfaces of the lens. In the April number of the *Review*, Tscherning writes again, interpreting Grossmann's observation as tending to prove the correctness of his own view, and he brings forward some additional observations and inferences in support of his contention. These are too lengthy to give here, but they go to show that the matter is not yet finally disposed of.

In the *Ophthalmoscope* for April, 1904, Sydney Stephenson and J. H. Chaldecott urge the advantages of ethyl chloride as an almost ideal general anæsthetic in eye work. It is easy, to give, anæsthesia is quickly produced, and its effects pass off rapidly. Neither cynosis nor jactitation is seen; vomiting is uncommon, and no deaths from its use have yet occurred in England. It is useful in examinations, as in children with intense photophobia, and in gonorrhœal ophthalmia, and also to facilitate ophthalmoscopic examination in refractory children. The following operations, amongst others, can be done under ethyl chloride:—Opening abscesses, extirpation of Meibomian cysts, passing lachrymal probes, paracentesis, cauterising of corneal ulcers, discission of lens, tenotomy of muscles, evisceration and enucleation of the eyeball. In a young child the dose required to induce complete anæsthesia is from 2 c.c. to 3 c.c., whereas to produce the same effect on a powerful man 6 c.c. to 7 c.c. should be used in one dose. The effect lasts about two minutes. They recommend a slightly modified Ormsby's ether inhaler as the best and simplest apparatus.

The Role of the Toxins in Inflammations of the Eye.

Randolph (*Bulletin of the Johns Hopkins Hospital*). According to Randolph there is abundant evidence to show that the healthy conjunctiva probably contains bacteria at all times. Those most frequently present are staphylococcus aureus, micrococcus lanceolatus, and micrococcus epidermidis albus. Most forms of conjunctivitis are caused by the multiplication of special bacteria upon or in the conjunctiva. The pneumococcus is generally believed to be the cause of "ulcus serpens"; the Koch-Weeks bacillus, of catarrhal conjunctivitis; the gonococcus, of gonorrhœal ophthalmia; and the diplo bacillus of Moran-Axenfeld, of subacute or chronic conjunctivitis. It is clear that these organisms do not set up inflammation by acting as foreign bodies, else all organisms would stand on the same footing, and the inflammation caused would be in proportion to their size (and number) and not to their vital properties. Moreover, they must be in contact with the eye for some time before causing reaction. Micro-organisms, therefore, produce inflammation by manufacturing soluble toxins, which in their turn act on the cells of the tissues. Experimental proof is difficult. Many of the pathogenic organisms found in the eye are peculiar to man. Bacterial toxins are complex, chemically undefined substances which can at present be recognised only by biological tests. Coppez has shown that the diphtheria toxin has a marked action on the cornea, and that the tears have no antiseptic action in this bacillus. The streptococcus and pneumococcus toxin, on the other hand, have very little action on the cornea (and yet "ulcus serpens" is said to be due to the pneumococcus!). A summary is given of the experiments of others, and Randolph's conclusions are in substance as follow:—1. Bacterial toxins, so far as tested, when dropped into the conjunctival sac, even for many hours, produced no inflammation or other injury. 2. The same toxins when injected into the tissues of the conjunctiva or into the anterior chamber, invariably set up local inflammation, the extent and intensity of which varied to some extent, according to the species of bacterium yielding the toxin. 3. Bacteria not previously proved to produce soluble toxins were found to produce the latter even in young cultures, and it is suggested that injections of bacterial filtrates into the eye, particularly into the conjunctival tissue, constitute a more delicate biological test for the detection of certain toxins than the tests usually employed for this purpose. 4. The experiments. . . emphasise the etiological significance of injuries of the covering membranes of the eye in favouring the actions of toxins and bacteria.

Cataract Extraction, with small Peripheral Button-hole in the Iris.

Beckers Chandler (*Knapp's Archives* for January, 1904). After performing the "simple" operation, *i.e.*, without iridectomy, in his earlier cases with good results, Chandler abandoned the operation because of a series of bad results from prolapse of the iris. He then modified the operation by making a peripheral buttonhole, by removing with fine forceps, toothed at the extremities of the blades, and fine pointed scissors, a piece of iris 1 m.m. in diameter as near the root of the iris as possible. This was done after the expulsion of the lens. The object was twofold—one to allow the aqueous to escape through the button-hole, and so prevent the iris from being pushed into the corneo-scleral incision, and also to allow of the escape of cortical matter from behind the iris. Chandler reports 312 cases, taken without selection after the first 50. The results were 91 per cent. successful, 3·5 per cent. "moderate," 2·6 per cent. fair, 1·2 per cent. poor, and 1·5 per cent. lost. There were four cases of prolapsed iris altogether, and two of these were due to the patients getting a knock on the eye some days after the operation. In the other two cases the opening in the iris had been made too far forward. In only three cases was there loss of vitreous. Iritis occurred in 32 cases, with blocked pupil in three of these.

* * *

"Practical Medicine" is the title of a new periodical published in Delhi. It is described as "A monthly record of the Progress of Medical Science, especially in Diagnosis and Treatment of Diseases by improved methods and new remedies, containing valuable extracts from the world's medical literature." The editor and proprietor is Ram Narain, L.M.S., Punjab Medical Service (retired), and it is published by the Medico-Scientific Press in Delhi.

CORRESPONDENCE.

London.

(FROM OUR OWN CORRESPONDENT.)

The Prevention of Consumption—Gift to University College—The Medical Lessons of the War—Epsom College—Commemoration Day at Glasgow University—The Production of Helium.

THE fifth general meeting of the members of the National Association for the Prevention of Consump- was held in London on March 10th, with the Earl of Derby in the chair. In moving the adoption of the annual report, the chairman said that the time had not yet arrived for the general notification of phthisis as an infectious disease. Compulsory notification had been in practice in New York for years, and a Select Committee of the House of Commons had recently sanctioned a by-law to enable the Corporation of Sheffield to follow New York's example. Several corporations and district councils had during last year contributed towards the erection of sanatoria, and the council hoped their example would, in the immediate future, be largely followed. The President of the College of Physicians, seconding the adoption of the report, said that the whole medical profession were watching with extreme interest what would be the results of compulsory notification at Sheffield. He pointed out that mortality from tuberculous disease was steadily falling in this country before even the medical profession knew of the existence of the tubercle bacillis, and as the infectivity of the disease was less than that of other infectious disorders, such as smallpox or typhus fever, there was encouraging reason to hope that it would eventually be possible to deal with tuberculosis effectively. The honorary treasurer of the Association gave a sorry account of its financial prosperity, and stated that within a very few months it would require to be wound up, unless more money was forthcoming. A large number of circulars had recently been issued to the charitable public, and the outcome had been an accession to the funds of the Association of a paltry contribution of about £100.

Sir Donald Currie has given £100,000 to further the cause of medical education in London, and in so doing has both facilitated the incorporation of London University and University College, and helped in the work of charity constantly carried on by University College Hospital. The details of the munificent gift are as follows:—£80,000 to erect the new buildings for the school of advanced medical studies; £20,000 for a new nurses' home for University College Hospital, and accommodation for students engaged in maternity work in the neighbourhood. On behalf of his three daughters, Sir Donald Currie proposes to contribute a further sum of £2500 for the library of the Nurses' Home. The Earl of Rosebery, as Chancellor of London University, and Lord Reay, as President of University College, have accepted Sir Donald Currie's munificence in the following letter of cordial thanks:—"38 Berkeley Square W. March 17th, 1904.—Dear Sir Donald Currie,—We beg to thank you most heartily for your magnificent gift to University College. It has a double value in that it will not only benefit the hospital and medical school, but will also assist the University and the College to carry out that policy of incorporation on which both have decided, and which both believe to be of the highest importance to the future of University education in London. If, then, we may be allowed to do so, we desire to combine with our thanks for your generosity an expression of our sense of the timely nature of your gift, and to assure you that both the University and College will value your great donation, not merely as a help in their immediate difficulties, but as directing their course along the line of development by which London may be made the seat of a University worthy of the metropolis of the Empire.—We are, yours very faithfully, ROSEBERY (Chancellor), REAY (President of University College)."

In reply to a question by Dr. Macnamara, in the House of Commons, Mr. Bromley-Davenport recently stated that, as a result of the inquiry by a Royal Commission on the treatment of the sick and wounded during the South African campaign, the following action had been taken on the recommendation of the Commissioners:—1. The establishment of officers had been increased by 100. The Royal Army Medical Corps had been increased by 400 men. 2. The supply of surgeons and trained orderlies in the event of a great war was now receiving careful consideration. The equipment provided by the Mowatt Reserves for three army corps, one cavalry division and line of communication troops would, it was hoped, be quite complete by the middle of 1904. 3. The supply of candidates was now sufficient, and the quality most satisfactory. A college had been established in London, through which all captains must pass before promotion. Promotion to the higher ranks would be by selection, and all must attain a high standard of qualification. Acceleration in promotion from captain to major could now be obtained by officers who showed special merit at examination. Also special professional attainments would be recognised by appointment to special posts carrying extra pay. 4. The formation of Queen Alexandra's Imperial Military Nursing Service provided for a great increase in the establishment of women nurses. 5. Sanitary officers had already been and were still being appointed to important commands. 6. A new and improved pattern of ambulance waggon had been adopted. 7. Experiments were now in progress having for their object the provision of a tent of improved pattern and more suitable for sick and wounded.

On account of its medical foundation and of the numerous advantages offered to the sons of medical practitioners, Epsom College, among the great public schools of this country, must always possess a special interest for our profession. A statement has recently been issued drawing attention to the successes which the school has attained during the past ten years. The record is one of which both the teaching staff and the pupils of the college have just reason to be proud. During the period which is covered by the report, 24 open scholarships have been gained at the Universities of Oxford and Cambridge, 35 boys have passed the preliminary scientific examination for the degree of M.B. of the University of London, about half being in division 1 (one in honours), 81 higher certificates (with 22 distinctions), and 276 lower certificates have been granted at the examination conducted by the Oxford and Cambridge Schools Examination Board; five boys have passed the intermediate science examination, and 73 have obtained South Kensington certificates in the Art examination in drawing. Epsom College, as it is equipped to-day, bears favourable comparison with our other large public schools. It stands in its own estate of about 80 acres, of which over 20 acres are set aside for purposes of recreation. Besides the school buildings and masters' houses, the institution comprises an infirmary with 40 beds, a laundry with a room for drying wet clothes and flannels; a swimming-bath, which has recently been reconstructed; chemical, physical, and biological laboratories, a large gymnasium, and a carpenter's workshop. There are 18 medical scholarships at the hospital schools in London, nine of which range in value from £120 to £150, and nine from £27 to £60. The school fee is 75 guineas a year, but sons of medical men are charged only 65 guineas. A prospectus containing full information can be obtained on application to the bursar, at the College, Epsom

A new departure was inaugurated at Glasgow this year in the celebration for the first time of an Annual Commemoration Day, to keep in remembrance the founders and benefactors of the University. The ordinary graduation ceremony took place on April 18th in the Bute Hall, and on the following day the commemmoration ceremonies were observed. Sir Wiliam Ramsay, K.C.B., Professor of Chemistry in University College, London, delivered an address on Joseph Black, M.D., who succeeded Cullen in the Chair of Anatomy and subsequently in the Chair of Chemistry. At the close of Sir William Ramsay's address, the University conferred the honorary degree of LL.D. upon Mr. Choate, the United States Ambassador; Mr. G. F. Deakin, an eminent civil engineer; Sir Ludwig Grant, Bart., Regius Professor of Public Law in the University of Edinburgh; Mr. John Honeyman, architect, of Glasgow; Mr. J. H. Muirhead, Professor of Philosophy in the University of Birmingham; Dr. William Stirling Brackenbury, Professor of Physiology in the Victoria University of Manchester; and Sir Wiliam Taylor, K.C.B., Director-General of the Army Medical Service. During the afternoon a memorial to the late John Young, M.D., Professor of Natural History and Keeper of the Hunterian Museum, was presented to the University. In the evening a banquet was given in the Bute Hall, under the presidency of the Principal, and was largely attended by many of those who had taken part in the proceedings of the day, as well as by the Lord Provost and other important Glasgow citizens.

Sir William Ramsay and Mr. Soddy gave an interesting description to the Royal Society on the 28th April of a series of investigations on the production of helium from radium with which for several months they have been closely occupied. They discovered, about ten months ago, that an emanation from the latter material, after remaining for some time in a securely closed glass tube, furnished a spectrum which corresponded with that of helium. This gas, originally detected in 1878 by Sir Norman Lockyer in the glowing atmosphere of the sun, was first found as a terrestrial element by Sir W. Ramsay himself, in a gas obtained from a mineral called clevite, one of the salts of uranium, and was identified with the solar constituents by Sir W. Crookes. Like argon, discovered a little while before this identification, it is a very inert gas, and its density is only about twice that of hydrogen. Investigation of it is, therefore, far from easy, but it has now been obtained from several other minerals, and is present in the gas given out from sundry mineral springs, including those of Bath. The spectrum, therefore, has become sufficiently well known to be readily recognised by experts. Radium, discovered still more recently by M. and Mme. Curie, remains a rarity, though in its case also the sources of supply are becoming more numerous. It will be remembered that it has exhibited properties which have thrown great light on the ultimate constitution of matter, and shown the atoms once regarded by the chemist as its ultimate condition to be themselves capable of dissociation and to pass, sometimes spontaneously, into corpuscles or emanations of a much simpler constitution. But while this spontaneous breaking up or dissociation so conspicuously exhibited by radium was becoming a familiar fact in chemical physics, its transformation into another element, which was the apparent outcome of Sir William Ramsay and Mr. Soddy's discovery, was yet more astonishing. The consequences were so far-reaching that the subject demanded the fullest experimental examination. The investigators accordingly set themselves to determine the volume of the emanation produced in a given time from a known weight of radium, in the form of bromide, as well as the quantity of helium resulting from the spontaneous change of the emanation. The minute quantity of material at their disposal rendered the research a tedious one, and obliged them to construct instruments exceptionally delicate for the purposes of the research. These, which were described to the Society, gave results as satisfactory as could be expected, and fairly concordant measures of the volume of both emanation and helium have been obtained. The former was collected from the radium bromide, was measured, and was found after a time varying with circumstances to yield a spectrum agreeing with that of helium, the presence of a characteristic yellow line being especially noteworthy. In one of these experiments this line was not visible in the first stage; next day it was seen, but was very feeble; then its strength increased from day to day, and other lines appeared to complete the identification. Quantitative results were obtained from some of the experiments, and the investigators have even calculated the numerical relation between the radium disintegrating and the emanation produced per second. The latter, they state, resembles the gases of the argon family in its chemical inertness, and its molecule is in all probability also monatomic, and not more than one atom of it can be produced from an atom of radium. They have succeeded in demonstrating that radium is such an unstable element that it actually changes during the processes of disintegration into another one. Unless these experiments can be disproved, they afford strong confirmation of those views about the ultimate constitution of matter which for many years past have been advocated by several of our foremost men in chemical physics.

Victoria.

(FROM OUR OWN CORRESPONDENT.)

Proposed Epileptic Colony in Victoria—A Medical Journal duns Medical Men for a Year's Subscription—Medical Men Interviewed and Advertised by Magazines—Medical Examination of Port Phillip Pilots—Out-patients at the Melbourne Hospital—Dr. Walpole—Annual Meeting of the Trained Nurses' Association.

A MOVEMENT has been made by the National Council of Women in Victoria to form an epileptic colony in Victoria. A deputation from the Council waited upon the Lord Mayor (Sir Malcolm McEacharn) to explain their objects and to get his valuable assistance. Unfortunately Sir Malcolm expressed his determination to oppose the initiation of any fresh charity in Melbourne. Lady Talbot, who presided at a meeting of the executive of the N.C.W.U., explained that this body, in order to commemorate in a practical manner its first annual congress, resolved to bring about the formation of an epileptic colony on self-supporting lines. The ladies who had formed the deputation to the Lord Mayor explained that it was in vain that they had pointed out that the proposed provision for epileptics was to be self-supporting, as he was prejudiced against it. The Minister for Lands was also interviewed by a deputation of philanthropists and the National Council of Women. Dr. Springthorpe advocated a land grant, and drew the Minister's attention to the number of epileptics which were not in any institution. If they were children, they were debarred from receiving education at the ordinary schools, and, if adults, they had, in many cases, no hospital, no association, no occupation, and no recreation. Neglected in mind and body, they were a burden and a sorrow to their relatives, till at last they sought shelter in a lunatic asylum or benevolent asylum. The Minister's reply was sympathetic; but unfortunately no suitable land was available within a reasonable distance of Melbourne. He would try to get a clause in the Closer Settlement Bill to provide for an area for an epileptic colony. There is no doubt that an epileptic colony is urgently required in this State, and there is no necessity for making it one of the charities, as it could easily be made self-supporting.

Several members of the profession have been dunned by the proprietor of the *Medical Press and Circular*, London, for payment of a year's subscription to this paper. They state that they have never given any orders for this paper, and in several cases have written denying their liability, and have refused to accept the paper from the postman for some time. Nevertheless, letters threatening legal proceedings have been received, and no notice is now being taken of them. Interest is being taken as to the subsequent behaviour of the proprietor of the above-mentioned journal.

The latest form of advertising which seems to be coming into fashion in these up-to-date times is the system of being interviewed by magazine reporters. Some of our leading surgeons have lately been interviewed, photographed, and written up by the enterprising reporter, who first intimates to the general public that the gentleman interviewed knows nothing about the matter, and so disclaims any responsibility. Nevertheless, the consulting-room, the operating theatre, etc., are reproduced faithfully, the daily life portrayed, and the favourite operations discussed. Now, if our leading surgeons allow this sort of thing in connection with their life's work, how can we blame the humble practitioner if he takes any opportunity that may arise to bring himself before the public gaze. There is no doubt America has cast its baleful advertising glamour over Australia, and the good old-fashioned medical etiquette is going to be a thing of the past in this country.

The medical evidence on Pilot Dennis, who was in charge of the R.M.S. "Australia," promises to be very interesting from a medico-legal point. It has been found that the pilot was suffering from a combination of Bright's disease and glycosuria, and that he is very myopic, his vision being only one-sixth of normal. There has been a great stir in the Marine Board since this wreck, and all the Port Phillip pilots have to go under medical examination by Dr. Grant, and their eyes are to be tested by Drs. Barrett and Orr. This should be done every six or twelve months if the safety of the travelling public is to be considered.

We hear that Dr. Walpole, late of Queenstown, who was very badly treated by the lodges at that place, is now at Gormanston, Tasmania, and is carrying on a most successful practice.

Many complaints have been made of the out-patients' department of the Melbourne Hospital. It has been compared to a refrigerating chamber, and the fearfully slow system of dispensing the medicines must be highly detrimental to the poor unfortunates who have to wait under such trying conditions.

The annual meeting of the Trained Nurses' Association was held on June 29th, Dr. Springthorpe presiding. Since last annual meeting, his Majesty the King had granted the title of "Royal" to the association. Arrangements have been made with the A.M.P. Society for a pension fund for nurses, and by-laws have been made to establish a benevolent fund, which now stands at £708. It was suggested that a penny a week from each member would bring in an additional £200 a year. The Women's Hospital committee have agreed to receive and train nurses desiring a special gynæcological certificate. An army nursing service has also been formed, Miss Glover having been made the lady superintendent. The report and balance-sheet were adopted, and £50 was placed to the credit of the benevolent fund, and £50 to the sick fund.

HONORARY SURGEONS TO HOSPITALS.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—After perusal of "Aqua's" letter in your last issue I understood that, practically, we both mean the same, but have had somewhat different conditions in mind when forming our conclusions. My experience differs from "Aqua's" altogether one-sided arrangement in so far that the honorary men were allotted a certain number of beds for the use of their patients. This, I claim, fulfils the conditions stated in my former letter, and though far from being perfect, it at any rate brings the thin end of the wedge, as it were, paves the way for more advantageous conditions, viz., equal rights in the hospital to all surgeons practising in the town.—I am, etc.,

E. Sydney Hawthorne.

Mudgee, July 5, 1904.

THE ADMINISTRATIVE CONTROL OF PULMONARY TUBERCULOSIS.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—I beg to enclose for your perusal a copy of some recent correspondence between the Minister for External Affairs and myself; the resulting memorandum by the Minister on the subject might, perhaps, be published in your next issue as of considerable public interest. You will notice my query related to "advanced consumptives," and I had specially in my mind those cases which are likely to become a burden on our charitable institutions shortly after arrival in this State. I believe it is the case that several subscribers to institutions such as the Queen Victoria Homes have expressed their apprehension that the greater the success of these institutions the greater attraction would there be for the further immigration of pauper consumptives from abroad. I had a recent interview on this subject with the chief executive officer of the Board of Health in New Zealand, where a special enactment is in force, and I am in agreement with his statement that the introduction of such cases is neither equitable nor is it necessary. Authorities are, I believe, generally agreed that apart from the above special class of cases the exclusion of consumptives from passing any frontier is no necessary part of the crusade against tuberculosis, provided they take those personal precautions which we know to be necessary in preventing the spread of infection. The subject is, perhaps, too lengthy for detailed discussion here, but might I be allowed to suggest in closing that the whole administrative control of pulmonary tuberculosis, including the question just raised, as well as the necessity for the notification of the disease, and the provision of suitable hospital accommodation for advanced consumptives in New South Wales, might fittingly be considered by a special meeting of the local branch of the B.M.A. The opinion of such a conference should also be pressed home on the notice of the Legislature, as there is ample evidence to show that the public would be none the worse of a lead from the profession on these matters.—I am, etc.,

M. McIntyre Sinclair, M.D.,
Med. Supt., Q.V. Sanatorium.

June 30th, 1904.

[*Copies of Correspondence.*]

Queen Victoria Sanatorium, Wentworth Falls, N.S.W.,
4th June, 1904.

To the Hon. the Minister for External Affairs, Federal Government Offices, Melbourne.

IMMIGRATION OF CONSUMPTIVES.

Dear Sir,—I beg to enquire, for my personal information, whether the existing Immigration Restriction Acts of the Commonwealth apply to the exclusion of advanced consumptives, and, if so, whether such regulations have ever been put into action. The question is one of importance to the community generally, as well as to institutions such as the Queen Victoria Homes for Consumptives, which are endeavouring to cope with the spread of the disease.

In the event of no such regulations being in force, I would venture to suggest that the whole question of tuberculosis and the admission or exclusion of consumptives might fittingly be discussed at the approaching congress on Federal quarantine, with a view to some common action being taken at all entrance ports of the Commonwealth.—I am, sir, your obedient servant,

M. McIntyre Sinclair,
M.D. (Glas.), D.P.H. (Camb.),
Med. Supt., Queen Victoria Sanatorium.

Commonwealth of Australia.
Department of External Affairs,
Melbourne, 10th June, 1904.

Sir,—I am directed to acknowledge the receipt of your letter of the 4th June enquiring whether the Immigration Restriction Act provides for the exclusion of advanced consumptives.

2. In reply, I am to inform you that that measure does not mention consumptives in the list of prohibited persons, but under the provision of paragraphs (*b*) and (*d*) of section 3 of the Act the admission of

(1) any person likely in the opinion of the Minister or of an officer to become a charge upon the public or upon any public or charitable institution; or

(2) any person suffering from an infectious or contagious disease of a loathsome or dangerous character,

is prohibited.

3. The question is, admittedly, one of great importance, and will receive further consideration at the hands of the Minister.—I have the honour to be, sir, your obedient servant,

(Sgd.) Atlee Hunt, Secretary.

To Dr. M. McIntyre Sinclair,
Queen Victoria Sanatorium, N.S.W.

Queen Victoria Sanatorium, 13th June, 1904.

To the Hon. the Minister for External Affairs.

Dear Sir,—I beg to thank you for yours of 10th inst., in reply to mine of 4th inst. In regard to the paragraphs of section 3 quoted, I shall be glad to know

(1) Whether, under present arrangements, the working of the Act in regard to, say, advanced consumptives depends solely on the Customs officer at entrance port, or whether he has the assistance of a port medical officer; also

(2) Whether the section has ever to the knowledge of the Department been applied to exclude advanced consumptives from entering New South Wales at the port of Sydney.

I shall be glad to know if I may make public use of your reply dated 10th inst. and of the reply to this communication.—I am, sir, your obedient servant,

M. McIntyre Sinclair, M.D., etc.

Commonwealth of Australia.
Department of External Affairs,
16th June, 1904.

Sir,—I am directed to acknowledge the receipt of your letter of the 13th inst., with further reference to the subject of the application of the Immigration Restriction Act to the admission of consumptives.

2. In reply to your enquiries in paragraphs (1) and (2) I have the honour to inform you that the Act has not been enforced in the direction of preventing the admission of consumptives.

3. There will be no objection to your making use of the correspondence that has taken place between us in regard to this matter.

4. I enclose for your information a copy of a memorandum by the Minister on this subject, which has been given to the press. As you will see, the matter is regarded by Mr. Hughes as one of considerable importance, and he has decided to submit it for the consideration of the Health Conference which meets next week.—I have the honour to be, sir, your obedient servant,

(Sgd.) Atlee Hunt, Secretary.

To Dr. M. McIntyre Sinclair,
Queen Victoria Sanatorium, N.S.W.

Memorandum by the Minister *re* enforcing paragraph (*d*) of section 3 of the Immigration Restriction Act, 1901, against consumptives.—

"The question of applying the provisions of the Immigration Restriction Act, so as to prohibit the admission of consumptives to the Commonwealth, has been brought under the Minister's attention by the Medical Superintendent, Queen Victoria Sanatorium, New South Wales.

"The matter is one of the greatest importance, and the Minister is thoroughly seized with that fact. It is undeniable that it is a subject surrounded by many difficulties. Personally, he leans to the opinion that consumption is such a dire scourge that if in any way we can tend to minimise the danger of contagion without inflicting too great a hardship or injustice on individuals we ought certainly not to shrink from the task.

"The chief practical difficulties appear to be, first, the question of examination and detection of the disease by medical experts. This itself is a task calling for special skill and experience; and secondly, the division of persons so found into two classes—those in whom the disease has reached such stages as to practically render recovery improbable, and the other, where, under favourable conditions, such recovery may be reasonably hoped for.

" As has been before pointed out, the matter presents the greatest difficulty, and before coming to any decision, the Minister has determined to refer the question to the Health Conference which is to sit in Melbourne this week."

Medico-Legal and Medico-Ethical.

An Interesting Medico-Legal Case.—We are indebted to Dr. A. A. Palmer for the following notes of a case which recently came before the City Coroner, Sydney:—Two young unmarried people were found dead in bed at a city boarding-house. Each had a bullet wound through the head. A letter was found in the room signed by the female, stating that the male was asleep, and that she intended to shoot him and then herself. The writing was identified subsequently as that of the female deceased. The evidence showed that they had been " keeping company " for some time, and that they had on more than one previous occasion slept at the same boarding-house. The relatives of the male deceased throughout the somewhat prolonged enquiry availed themselves of skilled legal assistance, and most of the evidence brought forward—but not all—was strongly in favour of the likelihood of the female, rather than the male, deceased having done the shooting. It was stated that she was very fond of him, and intensely jealous. She had frequently threatened to take her own life if he continued to treat her coldly, and it was said that on one occasion she even went so far as to take poison; but as she rapidly recovered on the arrival of her lover, this may be taken as extremely doubtful. On the night before the shooting, it was stated, she had said she intended shooting him. This was in the presence of the young man, who shortly afterwards said, " If you look in to-morrow's papers you will read the account of the tragedy," and " Good-bye; that is the last drink you will have with me." Other evidence was that he was of a cheerful disposition, in a fair position, and about to get a rise in salary. It was stated that on arriving about midnight at the boarding-house, the male—and, probably, to a less extent, the female—was under the influence of liquor; and more liquor was taken to their bedroom. Both were last seen alive next morning about breakfast time. In the evening the inmates of the house looked through one of the two windows of the bedroom—these looked on to a balcony—and saw them both in bed, apparently dead. The police were sent for, and, as they found the door locked, an entrance was effected through a window. They found a revolver in the right hand of the male deceased. This, they stated, was lightly, but naturally, grasped—except that the third finger was inside the trigger guard—and was pointed away from the girl. They removed the weapon, and found that two chambers were exploded. It was an old revolver of the type supplied to the police force; calibre, .450. The cartridges were loaded with black powder. One bullet was found on the floor, the other in the bed. The medical inspection was made next morning at eight o'clock. Both bodies were lying on their backs, the female to the right of the male. Each wore a singlet only, the bed clothes, apparently undisturbed, reaching to their waists. Her arms were resting on the bed beside her, the forearms semi-flexed, the hands resting about the anterior superior iliac spines. His left arm was very much the same, but the right was lying across his chest. All the fingers of this hand showed powder marks, most of which were easily removed. There were no marks or stains on either hand of the female body. There was a slight interval between the pillows, and the heads had apparently partly turned towards one another and partially slipped off the pillows. Both bodies were cold. Rigor mortis was present throughout. The bullet in the case of the male had entered in front of the right ear, and passing out above the left ear, left a frayed track along the pillow-slip, and made a distinct hole in the wall. It was found on the floor beneath this. Small pieces of bone were adherent to the pillow-slip along the bullet track. In the case of the female, the bullet entered about an inch behind the external angle of the left orbit, and, passing out behind the right ear, made a hole in the pillow-cover, exposing the feathers, and then, apparently, rolled down into the bed, where it was found. Brain substance protruded from each of the four openings. At each aperture of entrance, the edges of the skin were contused, the surrounding skin powder-stained (more marked in the male), and the hair singed (more marked in the female). All four wounds had bled freely, the two streams from the entrance wounds joining in a large pool between the two bodies. Outside the four streams there was no blood elsewhere. At all four wounds there was extensive fracturing of bone, and in the female a long fracture extended from entrance to exit wound anteriorly above the orbits, and both eyelids were ecchymosed. The eyelids of both were nearly closed. The medical man stated in evidence that he was of opinion that neither deceased had moved from the pillow after being shot, and that he was of opinion, apart from the difficulty of putting a weapon in the hand of a dead person, so as to look natural, that the revolver could not have been placed by the female where it was found. The jury recorded a verdict that the male fired both shots, and that the two probably agreed to die together.

A Doctor's Claim.—The plaintiff, Mr. D. E. Stewart, M.B., of Brunswick, Victoria, claimed from the trustees of the Shamrock Lodge No. 12, U.A.O.D., £2 2s for medical attendance on members of the lodge during the quarter ended February, 1904; £5 for breach of contract to supply him as a medical officer of the lodge; and also damages for failure to pay £2 2s due for the previous quarter within time; and for failure to supply the list of members on whom he was to attend. The defendants paid £2 2s into court in satisfaction of the first, and 1s for the third claim. After hearing evidence and argument, Judge Chomley found for the plaintiff for the amounts paid into court, and also for 1s for failure to supply the lists, all without costs. On the issue of alleged breach of contract he found for the defendants, with costs against the plaintiff. He said the plaintiff had failed to show that the defendants had any intention of breaking the contract, and plaintiff had no justification for acting on the assumption that they had such an intention.

Sydney District Nursing Association.—At a meeting of the members of the Sydney District Nursing Association held last month, the hon. secretary (Miss L. Sommerhoff) submitted a letter from the Governor agreeing to grant the grounds of Cranbrook for a fête on September 2nd and 3rd. A general committee of those present, with power to add to their number, was formed, and office-bearers of the fête committee were elected. Several ladies agreed to take stalls at the function.

PUBLIC HEALTH.

New South Wales.

Health of the Metropolis.—Dr. W. G. Armstrong, the city officer, reports:—There were 575 deaths during June of persons resident within the metropolis. This figure is greater by 94 than the number of deaths recorded in May, and is equivalent to an annual mortality rate of 13.39 per 1000 of the population. Corrected for the metropolitan proportion of deaths in benevolent asylums and hospitals for the insane throughout the State, the death rate becomes 14.42 per 1000. The causes of death responsible for this large increase in the monthly mortality were mainly those grouped under the heading of respiratory diseases. Bronchitis caused 52 deaths, while the average number of deaths from this cause during June in the five preceding years was only 25. Pneumonia, with a quinquennial average of 40 deaths in June, caused 54 during the month under review. Other diseases of the respiratory organs caused 13 deaths. Deaths under the headings of Bright's disease, diseases of the heart and blood vessels, cancer, diabetes, and diseases of the nervous system were more numerous than usual. Under all these headings the increase of mortality was among the aged, and it is evident that the low temperatures and keen dry westerly winds, which were so prevalent during the month, were responsible for much of the excessive mortality of the month and were fatal to persons of advanced age. From the prinicpal infectious diseases, with the single exception of influenza, the mortality was unusually low. Influenza caused 29 deaths, most of which were in elderly persons. Measles and scarlet fever were responsible for one death each. Whooping-cough caused two deaths, diphtheria three, and typhoid fever four. Phthisis, with 38 deaths, accounted for no more than the usual mortality. Diarrhœal diseases (diarrhœa, dysentery, and enteritis) caused 25 deaths, which is equal to the usual experience of June. Infant mortality was extremely low. Only 82 deaths of infants were registered, corresponding to an infantile mortality rate of 73 per 1000 births. Of the recorded deaths of infants, 22 were due to respiratory diseases, 17 to enteritis, and 32 to prematurity and other developmental causes. Notified attacks of infectious disease were few in number, except as regards diphtheria. This disease continues very prevalent in a sporadic manner, and no less than 93 attacks were notified during the month. Eighty attacks of scarlet fever and 33 attacks of typhoid were also notified. One case of plague occurred during the month. The patient was a young girl residing on premises connected with one of the wharves at Miller's Point. The attack was a fatal one.

The Bubonic Plague.—Another case of plague was reported in Sydney on June 21st. The sufferer, a girl, aged 15 years, resided near Miller's Point, and close to the place where an infected rat was caught on the 14th ult. She was removed to the Coast Hospital, but died next day. Dr. W. G. Armstrong, city health officer, reported at a meeting of the health committee of the City Council on July 7th that a considerable number of plague-infected rats and mice had during the past fortnight been taken by the council's cleansing gang at two produce stores in Wharf-street, near Darling Harbour. The buildings were comparatively new and in good condition, but the basement of the floor of one of them had not yet been concreted. The number of plague rats taken in the stores was 55 and 9 respectively. Some attempts to destroy the rats had been made by the occupants, but not in what could be called a systematic or satisfactory manner, and there was too much inclination to depend upon the authorities to take anti-plague precaution. The destruction of rats in premises was necessarily the duty of the occupants, and if they failed in that duty they allowed their rat-infested premises to become a danger to the whole community. The only portion of the city known at present to contain plague rats was that abutting on the shores of Darling Harbour. If all the stores and warehouses in that district were systematically kept free from rats and mice, there would be but little danger of any spread of the disease. Under present conditions it could not be said that we were free from such a danger. Dr. Armstrong recommends that the Harbour Trust be urged to press forward as rapidly as possible the concreting of the floors of the two or three buildings in their area specially liable to harbour rats, and the construction of a rat-impervious sea wall along the whole foreshore of Darling Harbour.

Victoria.

Plague Precautions in Melbourne.—Numbers of sickly rats have been seen about the Melbourne wharves recently. A rat which appeared to be sick was killed by a carter in Flnders-street, and the dead animal was sent to the bacteriological laboratory at the University. Dr. Bull found that the rat presented no indications of plague, but Dr. Gresswell is causing all the wharves, the ships, and the river banks to be thoroughly disinfected. Similar action was taken about four years ago, when the city was threatened with an infection of plague.

Diphtheria Epidemic.—Diphtheria has been very prevalent in Goornong, Learmonth, Newstead, Rochester and Wedderburn.

Prevention of Consumption.—A meeting of the Eaglehawk branch of the Victorian Association for the Prevention of and Cure of Consumption was held last month, when a communication was received from Dr. Zwar, hon. secretary of the organisation, inviting suggestions on the subject, and requesting a representative to join a deputation which is to interview the Minister for Mines during the month. After discussion it was decided to forward the following suggestions:—1. That a clause be inserted in the Amending Act making the use of sprays and jets in mines compulsory. 2. That the mining insp ctors be empowered to supervise ventilation in mines. 3. That a clause be inserted making it compulsory in cases where new shafts are to be sunk that there should be four compartments.

South Australia.

Board of Health.—During the fortnight ended June 25th there were notified 12 cases of diphtheria, three of erysipelas, one of cerebro-spinal meningitis, and eight of pulmonary tuberculosis. The city trained nurse has made 68 visits to 38 cases during the fortnight, and finally disinfected eight houses. The sanitary inspectors have served 127 notices during the fortnight; of these there were 35 to cleanse, ventilate, and repair houses; 41 to cleanse and otherwise attend to yards, out-premises, right of ways, and vacant land; three to cleanse and pave stables; 36 to cleanse and repair w.c.'s and urinals; and 14 to remove various other sanitary defects, chiefly pertaining to the sewer system. Special inspection has been done in relation to inspection of markets and dairies, disinfection of houses, and enforcing the by-laws relating to spitting on streets.

Queensland.

Bubonic Plague.—No case of plague has occurred in Queensland since June 12th last. The number of cases of plague that have occurred in Queensland during the year is as follows:—Brisbane, 25; Maryborough, 2; Cairns, 2. Rats and mice: Brisbane: Rats examined at Bacteriological Institute, 266; rats infected, 22; mice examined at Bacteriological Institute, 64; mice infected, nil; rats destroyed, 134; mice destroyed, 428; total number of rats and mice destroyed, 914. Ipswich: Rats examined at Bacteriological Institute, 64; rats infected, 7.

Prevention of Consumption. — At the annual meeting of the Queensland Association for the Prevention of Consumption the annual report was submitted. It stated that this association is now entering upon its fifth year of existence. The association has, during the past few years, consistently urged the establishment of separate institutions for the accommodaton of consumptive patients. The Governnment has set apart a portion of the Diamantina Hospital for the benefit of advanced consumptives, but the provision is wholly inadequate, the number of beds available being at the present time 20, while the Dalby Sanatorium for the treatment of early cases of phthisis is able to accommodate 32 patients. The executive decided to approach a number of hospitals that had ample grounds at their disposal, with the proposal to erect separate shelters for the outdoor treatment of a small number of consumptives. The following hospitals have been approached:—Toowoomba, Warwick, Roma, Maryborough, Gympie, Rockhampton and Charters Towers. A private sanatorium has been erected at Roma. The buildings are of ruberoid, surrounded with a verandah on all sides, and stand in a fairly big paddock. The charges are moderate. In October, Dr. A. J. Turner gave an instructive address on the "Campaign Against Tuberculosis in Queensland," which cannot have failed to have done a great deal of good. We are able to report good progress in the important matter of the prevention of indiscriminate expectoration in streets, railway carriages and tramcars. Notices have been fixed in a great number of public thoroughfares, and this has been lately followed up by a number of prosecutions. Expectorating in tramcars has been practically stamped out now for a considerable time. The Minister of Railways has promised that similar measures would be taken in the railway carriages, and notices have been fixed up in the compartments accordingly. Owing to death from phthisis being notifiable to the local authority, prompt measures of disinfection are taken in every case which is reported by the medical man in attendance. A house or room which has been occupied for some time by a tubercular patient who has removed somewhere else is not innocuous to an incoming tenant unless it be thoroughly disinfected. When renting another house the incoming tenant should insist upon seeing a certificate of disinfection. In this manner he would protect himself against the possibility of contracting consumption. The great balance of scientific opinion of the old country inclines during the last 12 months to the belief in the danger of tuberculosis being communicated by meat, and especially milk, in spite of the weighty utterances of Professor Koch to the contrary. It will be portion of our work during the ensuing 12 months to see that we are falling into line with other countries. The association is in a most flourishing financial position. We have a credit balance of £239. A great portion of this sum will be spent in subsidies to the hospitals which are willing to fall in with our proposal to erect separate shelters for consumptive patients. The chairman (the Hon. A. J. Thynne, M.L.C.) was accorded a hearty vote of thanks for presiding at the meeting, and in reply said some six or seven years ago he had made an effort to have a Dairy Bill passed, but he had encountered opposition from an unexpected quarter. This was due to the fear of restrictions which, it was thought, would be imposed upon the farmers under the bill. He suggested that the committee should formulate in plain, simple language, a short pamphlet such as the farmers might read so that they might understand exactly what had to be done to prevent tuberculosis in cattle. A short statement from those who knew would go a long way to allay the unnecessary fears of farmers, and would give their legislators a sound basis on which to work.

West Australia.

Bubonic Plague.—A case of plague occurred in Perth at the end of last month, and a second case of plague was reported on July 4th. The patient was a youth employed in a foundry, and resided near the locality where the first case occurred. He died next day. The other patient recovered. It is considered that the latter obtained infection from a cat he was in the habit of fondling. The health authorities have taken special steps to secure the cleanliness of the city.

At a meeting of the Executive of the Hospitals Aid Association, Brisbane, held last month, the sum of £2500 was distributed to relieve the needs of four participating institutions. Of this amount, £1600 was allotted to the Brisbane Hospital.

PRACTICES FOR SALE.

N.S.W.: Prac. in large town, cash income £600, appts. £200. Price £250; est. 8 yrs.

N.S.W.: Prac. in which £500 yearly can be saved. Furn., horses, everything, £400.

N.S.W.: Prac. near Syd., to be sold with house and land (1 acre). Property £1,280. Prac. £300.

Tas.: A City Prac., returning £800. Cash, appts., £300. Prompt buyer, £200.

Queens.: Coastal Prac., returning nearly £1000. Appts., £320. Furn. and Prac., £500.

N.S.W.: Prac. in good town, good climate, returning £1,100 cash. Est. 8 yrs. Several appts.

N.Z.: Country Prac., returns over £1000 cash. Horses and other appt., £220. Price, £800.

N.Z.: Unopp. Prac., cash take over £500. Est. 13 yrs. Price £200. Nice house, 3 acres land.

MR F. W. LOXTON,
16 O'Connell-street, Sydney.—[ADVT.]

EXCELLENT CONSULTING ROOMS in the pick of Macquarie Street, Sydney, on long lease, including attendance, &c. STANTON & SON,
Estate Agents, 109 Pitt Street.

The Commonwealth Quarantine Conference.

The conference of heads of the Health Departments of the several States of the Commonwealth, which has been sitting in Melbourne to submit for the consideration of the Commonwealth Government suggestions as to the provisions to be introduced in a bill dealing with the question of quarantine, completed its sittings and presented its report on July 8th. The States were represented as follows:—New South Wales by Dr. J. Ashburton Thompson, Queensland by Dr. B. Burnett Ham, South Australia by Dr. W. Ramsay Smith, Tasmania by Dr. J. S. C. Elkington, Victoria by Dr. D. Astley Gresswell, and Western Australia by Dr. Lovegrove. The terms of reference to the conference included the advisability of taking over the administration of the quarantine law of the several States and the provisions desirable to be introduced into a Federal Quarantine Bill, together with certain special subjects. Most of the time of the conference was occupied in laying down the lines on which the bill should run.

The conference urged the Commonwealth Government to take over the administration of quarantine without delay, and recommended that the Commonwealth Quarantine Executive should consist of a director-general of quarantine, with a salary of not less than £1800 a year, removable from his office only by a vote of both Houses; an assistant director-general of quarantine; deputy directors-general of quarantine in the several States; and port health officers; the deputy directors-general to consist of the permanent heads of the Departments of Public Health in each State, who should receive no remuneration from the Commonwealth Government, but who should take their instructions from the director-general, and should, in turn, exercise control over the port health officers in their own State.

The provisions suggested by the conference for inclusion in the Quarantine Act cover those already existing in the Acts of the different States, but go beyond them in some important particulars. The list of quarantinable diseases is to include smallpox, plague, cholera, yellow fever, typhus fever, leprosy, and such others as the Governor-General may from time to time notify by proclamation. It is proposed that medical quarantine agents should be appointed when desirable at any port in a British colony in close relation with the Commonwealth to issue certificates and bills of health to vessels proceeding to the Commonwealth. Provision is to be made for the proclamation of certain ports of entry, and certain classes of vessels would be required to touch first at such ports on entering the Commonwealth. Inspecting staffs would be stationed at such ports.

Inter-State traffic by land and sea is to be subjected to such control as may be necessary to prevent the passage of infection from one State to another. The return to their native countries of persons affected with leprosy or other proclaimed quarantinable disease is provided for. The Governor-General should have power to prohibit the importation of persons, animals, or goods from proclaimed places. Provisions for requiring vessels trading between Commonwealth ports to carry a surgeon when conveying more than a certain number of passengers, for subjecting vessels periodically to processes for the destruction of vermin, and for requiring vessels to carry prescribed disinfecting plants were inserted. The conference recommended that the Commonwealth should allow the use of quarantine stations or grounds to State authorities for the quarantining of cases of such disease as smallpox, which might arise among the resident population, costs of transport to and detention in quarantine stations of such cases being met by the States.

On the question of intra-State quarantine there was a difference of opinion among the members of the conference. By a majority, a resolution was carried affirming the desirabliity of the Governor-General having power of taking full control over measures for the suppression of outbreaks of quarantinable disease in any State, should such outbreaks threaten to become a danger to other States. The delegates from New South Wales and Western Australia opposed the resolution. They thought that the Commonwealth's power of control should extend only to persons connected with vessels recently admitted to pratique, and did not think that the Federal Government should interfere with the internal sanitation of the States.

The conference submitted recommendations dealing with compulsory vaccination, vital statistics, adulteration of food, and some special questions which had been submitted to it. It was emphatically affirmed that vaccination and revaccination afforded to the individual the only defence against smallpox, and that their compulsory enforcement throughout the Commonwealth would render quarantine as against smallpox unnecessary. The conference was of opinion that an Act providing for compulsory vaccination and revaccination would be most beneficial to the Commonwealth. On the question of restricting the admission of consumptives, the conference considered that quarantining measures at the port of arrival would be impracticable.

The Health of Melbourne.

ABSTRACT OF REPORT OF THE OFFICER OF HEALTH, DR. JAMES JAMIESON, FOR THE YEAR 1903.

The total number of deaths was 931, a large reduction on the figures for the two previous years, which were: 1075 for 1901, and 1012 for 1902.

The estimated population in the middle of the year was 67,260. Taking this as the basis of calculation, the mortality for the year was in the proportion of 13.8 per 1000. This represents a distinct improvement on the rate for 1902, which was 15 per 1000.

The steady lowering of the average death rate in recent periods shows a continuous improvement in the sanitary condition of the population.

The mortality from epidemic diseases was considerably below the average of recent years. The deaths from typhoid numbered only 5; from diphtheria and croup, 5; from scarlatina, 1; from measles, 2; from whooping-cough, 8; and from influenza, 6; or a total of 27. The cases notified under the Act were as follows:—Typhoid, 69; diphtheria, 110; scarlatina, 184; the other diseases are not notifiable, and very few of the cases are reported, or known in any way. When these figures are compared with those of deaths, the case mortality is seen to be extremely low. This is especially noteworthy in the case of diphtheria, since a very remarkable change for the better is shown since the introduction of the antitoxin treatment. It is gratifying to note the great and almost continuous lowering of the mortality from typhoid. In this disease the decline has been so uniform and continuous that it must be assumed that some great cause has been in equally continuous operation. This is probably the steady extension of the system of deep drainage, with water carriage.

Tuberculosis also shows a distinctly lower mortality in recent years. While the average annual mortality in 1889-1893 was in the proportion of 29 per 10,000, it was only 21 in the period 1899-1903. During the last five years the improvement seems to have come to a stop. The lessened fatality in recent years, as compared with an earlier period, is due to general sanitary improvement, to better drainage in the neighbourhood of dwellings, to better ventilation as well of private houses as of shops, workrooms and offices, and possibly to greater care with reference to milk and other food supplies. It is hardly possible, on the other hand, to escape the conclusion that the special precautions, in view of the infectious nature of the disease, though so widely inculcated, have hardly yet had time to bear fruit. A by-law against promiscuous spitting in public places came into force last year, and the appearance of the footways of main streets shows that good has been accomplished. In the city, since July, 1900, steps have been taken in all cases of consumption which have proved fatal to obtain disinfection or destruction of bedding and articles of clothing which had been used by the patient, and for cleansing and disinfecting the rooms chiefly occupied. Independently of direct preventive effects thus accomplished, a process of education has also been carried on; but the example thus set has not yet been largely followed, and therefore great manifest results could hardly have been expected. Increased sanatorium accommodation for early cases, and refuges for those in an advanced stage, are still urgently required.

The mortality from the diarrhœal diseases was unusually low, the number of deaths being only 80 as compared with 107 in 1902. This improvement is due very largely to improvement in the milk supply, and, probably, also to some extent to the cleansing of the surface soil and of street surfaces, the result of improved drainage and greater perfection in methods of cleansing the streets and lanes of the city.

The number of births was 1213, rather below the average of the last few years. A comparison of the period 1889-1893 with that of 1889-1903 shows that the average rate of infant mortality was 169 in the former and 125 in the latter. This lowering of the infant mortality goes in a measure to compensate for the low birth rate.

The chief causes of mortality, other than the ordinary epidemic diseases, which produce quite a small proportion of the whole, were:—Tuberculosis, 153; diarrhœal diseases, 80; pulmonary diseases (other than consumption), 93; circulatory diseases, 110; nervous diseases, 72; urinary system diseases, 77; cancer, 64. With respect to tuberculosis, during the year it was placed on the list of contagious diseases to be notified, and a considerable number of cases have been reported, chiefly of patients under treatment at the hospitals, but comparatively few cases have been notified by private medical practitioners. One clear result of the popular recognition of the contagious nature of consumption has been to make the lot of many subjects of the disease very much harder, by causing them to be feared and avoided to an extent that is unfair and beyond occasion.

Whenever the existence of a case of consumption is known, whether by notification or the occurrence of death, the house is visited, and necessary inquiries made. If necessary, disinfection or destruction of clothing and bedding is carried out, and the rooms chiefly occupied are cleansed, in most cases by washing down roof and walls with a disinfectant solution, and freshly colouring or papering. It very seldom happens that any objection is made by owners or occupiers to carrying out necessary measures of precaution. There is special strictness in securing that a house, which has become vacant owing to, or soon after, the occurrence of this (or any other contagious) disease, shall not be occupied by a new tenant till sufficient cleansing and disinfection has been carried out. When fumigation is considered desirable or sufficient, this is usually done free of charge by the officers of the corporation. In addition to the supervision exercised in cases of scarlet fever and diphtheria, action was taken in 94 cases of consumption reported, chiefly deaths. Where the patient was alive repeated visits were, if necessary, paid, and advice or directions given.

The grant of £50 to the bacteriological laboratory at the University was continued in 1903. The chief work done was in the systematic examination of samples of the Yan Yean water, with the special object of ascertaining whether there is evidence of contamination occurring within the metropolitan area by leakage into the pipes. A six months' daily examination of water from a tap at the Melbourne Town Hall was made from July 1st to December 31st, inclusive. The average number of micro-organisms per cubic centimetre for the second half of 1903 in the water at the Melbourne Town Hall was 251. Considering the amount of rainfall, this number is not excessive, but makes an interesting contrast with that of the previous year, which was a dry season, when the average of several city and suburban taps was only 94. Apart from water examinations, other important investigations relative to diseases of stock were made on behalf of the Melbourne City Council. Specimens from seven diseased pigs were forwarded in March and July by Mr. Robertson, Superintendent of the City Abattoirs, by means of which valuable information was gained concerning the presence of hog-cholera (swine fever) in Victoria. Mr. Robertson also forwarded, on August 21st, a very interesting and uncommon tumour growth from a bullock killed at the Melbourne Abattoirs. The condition proved on examination to be of a cancerous nature (sarcoma).

The condition of premises used for carrying on "noxious trades" has received special attention during the year. Further improvements have been effected in connection with those engaged in boiling down and the manufacture of animal manures. The work of inspecting houses, in respect to the sanitary condition, was continued. The number certified as unfit for occupation was 42, and of these three were pulled down and 29 repaired to the satisfaction of the officers.

Hudson's "Eumenthol" Jujubes (Registered) are a Gum Jujube containing the active constituents of well-known Antiseptics, Eucalyptol, Thymus Vulg., Pinus Sylvestris, Mentha Arv., with Benzo-Borate of Sodium, etc., and exhibit the antiseptic properties in a fragrant and efficient form. Sold by all chemists; tins, 1s 6d. Are Antiseptic, Prophylactic, reduce Sensibility of Mucous Membrane. Mr. W. A. Dixon, F.I.C., F.C.S., Public Analyst of Sydney, after making exhaustive tests, says:—"There is no doubt but that 'Eumenthol' Jujubes have a wonderful effect in the destruction of bacteria and preventing their growth. . . . I have made a comparative test of 'Eumenthol' Essence and Creosote, and find that there is little difference in their bactericidal action."—[Advt.]

HOSPITAL INTELLIGENCE.

Adelaide Hospital, S.A.—From the thirty-fourth annual report of this institution for the year ending December 31st, 1903, we learn that there were remaining in hospital on December 31st, 1902, 182; admitted during the year 1903, 3035; total, 3237. Discharged—Cured or convalescent, 1712; relieved, 805; unrelieved, or at own request, or absconded, 244; died, 291; leaving in hospital on December 31st, 1903, 185. Average number resident daily throughout the year, 254; mean residence of each patient in days, 23; rate of mortality, 9.53 per cent.; number of out-patients, 20,059; number of operations, 1413. The statistics for the year, as compared with those of 1902, show the following increases, viz., 27 in the number of deaths of in-patients, 6 in the average daily number of patients in hospital, £117 19s 7d in the amount of fees received for the maintenance of patients. Also the following decreases: 138 in the number of patients admitted, 174 in attendances out-patients, and £1522 11s in the total expenditure. 155 patients have been to the Convalescent Home, Semaphore, at a cost to this institution of £125 15s 7d. The number of cases of enteric fever treated was 76, of whom 7 died. Dr. Phillips' and Dr. Wylde's deaths, which were deeply regretted, deprived the hospital staff of two honorary consulting surgeons. Professor Stirling and Professor Watson were appointed honorary consulting surgeons. Dr. Leith Napier resigned his appointment as surgeon and gynæcologist, and Dr. Shepherd was appointed honorary gynæcologist. The following honorary officers were reappointed for a term of three years: Honorary physicians, Dr. Hayward, Dr. Niesche, Dr. J. C. Verco; honorary surgeons, Dr. Giles, Dr. Poulton; honorary ophthalmologist, Dr. Symons; honorary assistant surgeon, Dr. Cavanagh-Mainwaring; honorary assistant physicians, Dr. A. A. Hamilton and Dr. Swift. The Government abolished the office of physician to the isolation wards, and Dr. Ramsay Smith's resignation of the appointment was accepted. It was resolved that in future no cases of infectious disease, except typhoid fever, should be admitted to the hospital. The necessary money (£1170) for alterations to the operating theatre was granted by the Commissioners of the Adelaide Hospital. The medical superintendent was sent to Sydney and Melbourne to obtain information, and plans were prepared by the Public Buildings Department, and approved by the surgical staff of the hospital. The scheme included the establishment of a complete sterilising plant and many improvements to the lighting and appointments of the theatre. The expenditure for the year 1903 was £17,542 10s 8d, as compared with £19,065 1s 8d for 1902, showing a reduction of £1522 11s.

The Gundagai Hospital, N.S.W.—The new hospital at Gundagai, which was opened on May 28th last, cost over £3500, and of this amout £700 has been collected locally within the last six months, while sums totalling £1000 had been previously set aside from the general funds. At present the funds are slightly overdrawn; but £500 of the Government subsidy has yet to be paid over, and when this is done there will be a credit balance. The new hospital is not yet occupied, as it has still to be furnished. The plans were drawn by Messrs. Nixon & Adam, of Sydney. In the work are embodied many suggestions of Dr. Gabriel, the surgeon to the institution, and the admirable results achieved are in great measure due to his keen interest, careful forethought, and constant supervision. The building is situated at the summit of a gentle rise, and commands magnificent views in three different directions. It is constructed throughout of red brick, with a white frieze of rough plaster. It consists of three blocks, connected by covered ways. The main block contains a central hall, 20 ft. by 15 ft.; from this open the two wards, one on either side. The male ward is to hold eight beds, measures 40 ft. by 26 ft. The female ward, 26 ft. by 21 ft., will hold four beds. The two wards are connected not only by the hall but also by the nurses' duty room, which opens from the back of the hall; the duty room is 20 ft. by 13 ft., and contains accommodation for the dispensary; is fitted with sink and cupboards, and has windows overlooking both wards. The operating-room is 20 ft. by 17 ft., has a large bow window, and is lighted also by a skylight; it has a well-laid tiled floor. Connected with each ward, but separated by double-doored passages, with cross ventilation, are bathrooms and closets. The closets are fitted with pails, and will probably prove troublesome to keep in good order. The whole block is surrounded by an 8 ft. verandah; the doorways are fitted with flyproof gauze doors, in addition to the ordinary wooden panelled doors. From the back of the duty room extends a wide covered way leading to the kitchen block, which is very complete, and contains also laundry and servants' and wardsman's bed and dining rooms. The nurses' quarters, connected by covered way with the verandah of the main block, to the north of which they are situated, comprise a five-roomed cottage; the rooms are all of fair size, and nicely finished; one is set apart as a private ward, to be called the Robinson ward, in honour of Mr. James Robinson, of Kimo, the president of the hospital, and at once the largest benefactor and the most successful collector. These two blocks also have good verandahs. No provision has, so far, been made for infectious cases; but it is intended to erect a special ward as soon as funds permit, and the large amount donated—so that the hospital is practically free of debt—makes it likely that this work will be undertaken very shortly. The buildings are lighted throughout by acetylene gas in a most satisfactory and complete manner, and at night present a brilliant spectacle. The ventilation generally in the wards is excellent. There are large outlets, by means of cowled tubes from ceiling to roof, while the intake is by means of ordinary fenestrated metal plates in the walls, and, in addition, by a system of iron hoppers, one over each window, which externally open above the verandah roofs, and internally discharge currents of air upwards; they can be shut down if required through stress of weather. The water supply is dependent on the roof catch; however, the roof is very extensive, and, in addition to half a dozen large iron tanks, there is an underground tank to hold 27,000 gallons. The drainage from the sinks and baths is carried away underground and discharged into the hillside, about 50 yards from the south end of the building.

Royal Alexandra Hospital for Sick Children, Sydney.—At the last monthly meeting of the board of this institution, the house committee's report showed that there had been admitted to the general hospital during the last month 48 patients; discharged, 48; deaths, 4; remaining in hospital, 48. Admitted to the diphtheria ward, 8; discharged, 7; death, 1; remaining in hospital, 2. Out-patients, new cases, 529. It was stated that the building fund now amounted to £20,000, including a recent anonymous donation of £2000. It was resolved that specifications be prepared forthwith, and that tenders be called for the complete buildings for the new hospital, but that the same be sent in in sections, and that the work be proceeded with as funds are available, It is estimated that the first contract will be for about £25,000.

Benevolent Society of New South Wales.—At the monthly meeting of the board of directors of the Benevolent Society of New South Wales, in connection with the Hospital for Women, Paddington, returns were submitted showing that during the month of May 54 women had been admitted, in addition to the 38 women and 14 children in the hospital at the end of April; that 29 children had been born during May, and 48 women and 31 children had been discharged, leaving 44 women and 12 children in the hospital at the end of the month. Regarding the Hospital for Infants and Asylum for Women and Children, Ultimo, returns showed that during the month of May 36 women and 35 children had been admitted for shelter and treatment, and, together with 67 women and 78 children remaining at the end of April, made a total of 216 women and children sheltered during the month. On May 31st, 58 women and 75 children were being cared for by this department. The new buildings in Thomas-street, city, to be occupied by the society as a Hospital for Infants and Asylum for Women and Children, are now practically finished, and arrangements were made for a sub-committee of ladies to provide the furnishing.

St. George Cottage Hospital, Sydney.—At the monthly committee meeting of the St. George Cottage Hospital it was reported that the Trained Nurses' Association had resolved to recognise the local hospital as a training school for nurses provided an average of 10 occupied beds was maintained. The following resolution was carried:—"That this committee is of opinion that, considering the endowments given to other hospitals, this hospital has not been fairly treated in not having received the special endowment promised by Sir John See at the laying of the foundation stone nearly a year ago." It was resolved to forward a copy of the same to Mr. Carruthers, member for the district.

A New Women's Hospital, South Sydney.—Last month Lady Rawson paid a visit to the South Sydney Women's Hospital, Stanley-street, Newtown, and declared open the extension of the work which had recently been made. Mr. Ardill explained that the hospital was formerly known as the Home of Hope, but had been renamed the South Sydney Women's Hospital. The whole of the building would in future be entirely used for hospital work, and would include a maternity hospital, out-patients' department, district midwifery nursing branch, training school for midwifery nurses, gynæcological branch, and a training school for children's nurses. During the past 12 months there were 168 children born in the present hospital, and many women and children had been treated in the out-patients' department; 191 women had been attended to in their homes. The Home training school of midwifery nurses had granted 19 certificates to nurses who had been under special training

Queen Victoria Homes for Consumptives, N.S.W.—At the monthly meeting of the house committee of the Queen Victoria Sanatorium and the Home for Consumptives at Thirlmere, the medical superintendent's report at the Wentworth Falls Sanatorium showed that during the past month five cases had been discharged, and five cases had been admitted. Of the former, two left with the disease arrested, wo much improved, while one patient had been transferred to the surgical wards of the Royal Prince Alfred Hospital. The acting matron's report (Thirlmere) showed that there were 41 patients in the home. During the month 13 had been admitted, nine had been discharged; with the exception of four cases the majority of patients were progressing favourably. A sub-committee, consisting of Dr. Sydney Jones, Dr. Cecil Purser, Dr. Ewan Frazer, Mr. H. S. Levy, and Mr. Kent had paid a visit of inspection to the home on the 6th ult. Miss Emily Tunks had been selected to fill the position of matron at the Thirlmere Home. The hon. treasurer reported having received cheques for the support of beds for one year from the suburbs of Strathfield, Homebush, and Randwick, and from Goulburn a cheque for the support of a bed at the Thirlmere Home.

Ipswich Hospital, Queensland.—At a recent meeting of the board of management of this hospital, the finance committee presented a special report on the treatment of scarlet fever patients, which stated that in the committee's opinion there was not sufficient room in the hospital grounds to erect any new buildings, and suggested an effort should be made to obtain a portion of the Town Council reserve. If this were obtained, they were prepared to deal with the joint board on the following terms:—(*a*) The hospital to contribute one-third of the cost of erecting the necessary buildings; (*b*) in the event of the joint board being dissolved, and no other authority being substituted, the land, buildings, and contents to become the sole property of the hospital; (*c*) scarlet fever patients unable to make full payment to be admitted by ticket, the joint board to pay the hospital the total weekly cost of treatment and maintenance, less an amount equal to the weekly average cost of treating ordinary patients; (*d*) if a patient or his parent can only afford to pay part cost of treatment, then the sum so paid to be equally divided between the hospital and the joint board, but the latter board to pay in the first instance for such part-paying patient as if he was a non-paying patient; (*f*) the joint hospital board to be solely responsible to the hospital that all except full paying patients are supplied with tickets, and that the hospital receive all charges for treatment, the question whether a patient be a full or partial paying one to be decided by two persons, one to be appointed by each board. The cost of erecting and equipping the proposed new hospital was estimated at about £800. The consideration of the report was adjourned till the next meeting.

Hobart General Hospital.—At the usual monthly meeting of the board of management of the Hobart General Hospital the visiting committee reported that during the month the electric light had been installed in the operating theatre. The whole equipment of the operating theatre was now as good as it was possible to be. The medical committee reported that in accordance with the resolution of the board of management, they had considered the letter received from the senior house surgeon, drawing attention to the necessity for providing separate accommodation for phthisical patients and others suffering from tuberculous disease, and were unanimously of opinion that the time had arrived when all tuberculous cases should be isolated in separate wards, because of the danger to other patients of infection, and recommended that the board should request the Government to take such steps as may be necessary to provide such accommodation, either at the hospital or elsewhere, as it was impossible to provide efficient isolation in the present hospital buildings. It was decided that the ambulance should be fitted with rubber wheels, the cost to come out of the Samaritan fund. A letter from the chief medical officer asking the co-operation of the board in staffing the quarantine station, should necessity arise, was referred to the medical committee for report.

Royal Prince Alfred Hospital, Sydney.—The work of erecting the two pavilions at the Royal Prince Alfred Hospital is being accelerated. The whole of the scaffolding in front of both buildings has been taken down, and the brick and stone work cleaned with acid. Both buildings have been roofed in. All outside windows are in their places; the concrete floors have been nearly all laid; the concrete staircases, as far as treads and risers are concerned, are all built in; a good deal of the plastering has been got through, and, generally speaking, steady progress is being made. But the urgent need of more accommodation has led to special attention being devoted to finishing off the basement story of the southern pavilion. It is expected that in a few weeks this floor will be ready to hand over for use by the outdoor patients' department of the institution. One or two extra small wards will in this way also be provided. The corridors are being paved with arkilite, while the wards have 1¼ in. pine flooring resting on the concrete. Most of the walls are being finished in opalite paving to a height of 6 ft., and above that in Keen's cement or very finely trowelled and polished Portland cement. For finishing the walls of the back rooms lime putty, worked up to a polished face, is being introduced. With the present staff it is believed one of the pavilions will be finished in five or six months, but the authorities are anxious that the staff should be doubled, for the importance of having more hospital accommodation is daily making itself felt.

Sydney Hospital.—At the last monthly meeting of the Board of Directors, the President stated that the question of protecting the hospital against a possible outbreak of fire at Parliament House had been very carefully considered by the house committee, and that certain suggestions had been approved by the honorary architects. The house committee was authorised to take such steps as might be considered advisable. Sir Matthew Harris offered to present to the institution two pictures of the original design of the Sydney Hospital, as prepared by the late Colonel Rowe. The offer was thankfully accepted. Rules to govern the new position of honorary assistant skiagrapher were submitted and approved. In connection with the proposed rebuilding of the old south wing, the president stated that the Government was still being communicated with.

Lady Lamington Hospital, Brisbane.—Her Excellency Lady Northcote, when in Brisbane recently, visited the Lady Lamington Hospital and presented a cheque for five guineas to the hospital funds. On the 23rd instant her Excellency will lay the foundation stone of the new hospital buildings, which will cost about £5000. The plans have been prepared, and when completed there will be accommodation for 16 patients. The present building has only nine beds.

Melbourne Hospital.—In addition to a previous cheque for £725, the Melbourne Hospital committee has received a further sum of £1017 11s 8d from the bazaar committee of the recent Druids' gala. With the cheque was a letter suggesting that £500 of the money might be spent in having complete plans for a new hospital prepared, such plans to be followed in all future additions and alterations to the institution. After discussion, it was decided to refer the matter to the buildings committee for report. The total receipts from the bazaar amounted to £4815 4s 2d, and there was a balance to profit of £3771 18s 8d, with more to come in. The whole of the profits will be delivered to the hospital within two months, and this will reduce the hospital maintenance debt to under £800.

MILITARY INTELLIGENCE.

Commonwealth Military Forces.

Lieutenant-Colonel W. L. Eames, C.B., and Captain J. Kerr have been appointed in medical charge of permanent troops in the Newcastle and Wollongong districts, respectively.

In connection with the Army Nursing Service, Lady Superintendent E. J. Gould and Superintendent J. B. Johnson (both from the New South Wales Army Nursing Service Reserve) have been appointed Lady Superintendent and Matron respectively.

NEW ZEALAND VOLUNTEER MEDICAL STAFF.

Laing, John Adolphus (New Zealand Militia), to be Surgeon-Captain.

MEDICAL NOTES.

A Clinical Afternoon at the Royal Alexandra Hospital for Sick Children.—A clinical afternoon was held on Friday, June 24th, at the out-patients' department of the Royal Alexandra Hospital for Children, Sydney; Dr. Money presided. The following cases were shown:—A case of congenital proptosis, associated with several holes in the skull, and a case of pseudo-hypertrophic muscular paralysis, by Dr Litchfield. A rapidly-growing nævus of the face, treated by electrolysis, by Dr. Wade; a case of basal meningitis, by Dr. Littlejohn; a case of disseminated sclerosis, apparently congenital in origin, by Dr. Gill. It is proposed to hold these meetings once a month, and the staff will welcome medical visitors. The next meeting will be on Friday, July 22nd, at 4 p.m., at Valentine-lane.

Guy's Hospital Old Students' Dinner.—The members of the English football team now visiting Australia, connected with Guy's Hospital, were entertained at dinner at the Union Club, Sydney, on Thursday, June 30th, by the Guy's men practising in Sydney. Dr. Crowther, of the Westminster Hospital, and Mr. Bedell-Sivright, the captain of the team, were also guests. A general wish was expressed that this might be the prelude to a biennial dinner of old Guy's men practising in New South Wales. We are requested to ask anyone interested in this proposal to communicate with Dr. Gill, 18 College-street, Sydney.

Sydney Dental Hospital.—A deputation of professional gentlemen interested in the Sydney Dental Hospital waited on the Premier, Mr. Waddell, on June 29, to ask for a sum of money in aid of the institution. It was represented to the Premier that financial assistance was very much needed, for they found it difficult to carry on without some immediate Government support. Since the opening of the institution in October, 1902, and up to May of this year, the following work had been done:—Patients treated, 12,404; attendances of patients, 14,037; extractions (ordinary and anæsthetic), 14,676; fillings, 4251; dentures supplied, 155; dentures repaired, 17; anæsthetic cases, 439; average daily attendance, 34; average daily treatment, 30. Mr. Waddell decided to place a sum of £300 on the next Estimates by way of a special grant.

Telephone Concession.—The Hon. the Postmaster-General has approved that medical practitioners connected with telephone exchanges at which a day service only is provided be permitted to have their telephone lines connected during the night with subscribers to the same exchange, in anticipation of an urgent call being made for medical attendance during the time such exchanges are closed. No additional charge is to be made for the concession, and no responsibility is to be incurred by the department in the event of any failure to make the desired connections.

St. Vincent's Hospital Ball.—As a result of the St. Vincent's Hospital ball held in Sydney last month, a cheque amounting to £409 6s 2d has been presented to the Mother Rectress by the Lady Mayoress (Mrs. S. E. Lees).

Royal Victorian Trained Nurses' Association.—The annual meeting of the Royal Victorian Trained Nurses' Association was held last month, under the presidency of Dr. Springthorpe. The annual report stated that the general work of the association had proceeded uninterruptedly and satisfactorily. The council had entered into an arrangement with the Australian Mutual Provident Society whereby a special table of fees for a pension fund for nurses was approved. By-laws for a benevolent fund had been pased. The fund now stood at £708, and the interest was available for distribution. So far, only one-eighth of the matrons and one-thirtieth of the nurses on the register had contributed to it, though it was specially organised for the relief of their poorer sisters. A penny a week from each member would bring in an additional £200 a year. During the year reports had been received from the different training schools as to the way in which they were carrying out their educational obligations. It was gratifying to find that in the vast majority of cases sustained attempts were being made to provide trainees with all the necessary facilities. Satisfactory arrangements had been made for the training of nurses seeking special gynæcological certificates. It was also stated that there had been formed in the different States an Australian Army Nursing Service, and Miss Glover had been selected as lady superintendent.

Australasian Trained Nurses' Association.—The annual meeting of the Australasian Trained Nurses' Association was held in Sydney on July 11th. Dr. Thring occupied the chair. The annual report stated that there were now on the register 689 general and 174 midwifery nurses. Eleven general hospital and one midwifery hospital had been recognised during the year as training schools for nurses. In the case of two hospitals recognition had been withdrawn, and in two others suspended owing to failure to comply with the requirements of the association. As had been anticipated, considerable difficulty had been experienced by some of the smaller hospitals in complying with the regulations of the association—a difficulty which, it was stated, fully justified the council in its reluctance to recognise small hospitals as training schools. The number of hospitals now recognised as training schools was (exclusive of Victoria and New Zealand) 72 general and seven midwifery. During the year an application had been received from Queensland for the formation of a Queensland branch of the association. The council, having obtained the consent of the members to form branches in other States, drew up a set of rules to govern the establishment and working of State branches of the association. The question of State registration or incorporation of the association was receiving the careful consideration of the council, and it was hoped during the coming year to bring the matter before the association. The problem of uniform central examination was still unsolved, but the formation of branches in each State would go far to solve the difficulty. The statement of accounts showed a credit balance of £555 11s 3d. The following officers were elected:—President, Dr. Thring; vice-president, Dr. Fiaschi; hon. treasurer, Sir James Fairfax; hon. secretaries, Dr. Blackburn and Miss Kendal Davies. A general discussion took place in regard to the position of midwifery nurses of the association, and it was decided, after expressions of opinion from Drs. Worrall, Crago, Spencer, Thring, Sinclair Gillies, and others, that in matters referring to the midwifery branch the decision of the council should be final, without reference to general nurses.

A Phenomenal Birth Rate.—The highest birth rate ever recorded in London or the country has been notified by Dr. D. L. Thomas, medical officer of health for the Borough of Stepney, who on May 20th reported that in the parish of St. George's-in-the-East —the alien headquarters—the birth rate for the past month reached the extraordinary figure of 60.8 per 1000. That for London for the same period was at the rate of 27 per 1000.

University of Sydney.—The following students were successful in the examination for the degree of Bachelor of Medicine and Master of Surgery held at the Sydney University in the beginning of Trinity term:—E. C. Chisholm, R. Perkins, A. B. Phillips, G. A. Vivers.

Charitable Donations and Bequests.—The late Lady McCulloch has bequeathed a sum of £200 to the Melbourne Hospital. Under the will of the late Sir Daniel Cooper, the sum of £2500 was left to Messrs. Tom Raine and J. Russell French for distribution amongst the local charities, and the money has been distributed as follows:—Sydney Hospital, £500; Royal Prince Alfred Hospital, £500; St. Vincent's Hospital, £500; Sydney Hospital for Sick Children, £200; Balmain Hospital, £50; North Shore Hospital, £150; Parramatta Hospital, £50; Western Suburbs Hospital, £50; St. Joseph's Hospital, £25; St. George's Hospital, £25; Manly Hospital, £25; Marrickville Hospital, £25; Carrington Convalescent Hospital, £150; Lewisham Hospital for Women and Children, £50; St. Margaret's Maternity Hospital, £25; the Women's Hospital, £50; Sydney Homœopathic Hospital, £25; the Surgical Appliance Aid Co., £25; the Sydney Medical Mission, £50; District Nursing Association, £25. Some difficulty was occasioned in arriving at what would be a fair apportionment amongst the various charitable organisations, but it was eventually decided to follow the lines of the Hospital Saturday distribution.—The late Mr. J. H. Angas, of Adelaide, has bequeathed £1000 to each of the following institutions:—The Home for Incurables, St. Margaret's Convalescent Home.

At the invitation of the ladies' committee of the Women's Hospital, Glenmore-road, Paddington, Lady Rawson paid her first visit to the institution on July 15th. Lady Rawson was met on arrival by Sir Arthur Renwick (president of the Benevolent Society of New South Wales), the ladies' committee, Mrs. Graham (matron), and Miss Mason (sub-matron). Lady Rawson was presented with a handsome bouquet by Mrs. Buzzacott on behalf of the ladies' committee.

At a recent general meeting of subscribers to the Camden Cottage Hospital it was decided not to adopt the committee's suggestion to alter the rule making it read that no fees be charged to patients in the infectious ward. The usual charge is to be made.

PERSONAL ITEMS.

The King has sanctioned the promotion of Surgeon-General W. D. C. Williams, C.B., from Hon. Associate to Knight of Grace in the Order of the Hospital of St. John of Jerusalem in England.

In connection with the St. John Ambulance Association, the following gentlemen have been decorated by Lord Northcote:—For decoration as Hon. Serving Brother of the Order, Major G. Lane Mullins, M.D.; Major A. E. Perkins, M.B., D.S.O.; Dr. T. Storie Dixson.

Dr. Odillo Maher will resume practice at his rooms in College St., Sydney, on August 1st.

Dr. Knaggs has resumed practice at Lyons-terrace, Hyde Park, Sydney.

Dr. E. Maynard Pain returned to Sydney after his trip to New Zealand on June 22nd. He leaves Melbourne on July 26th, per the N.D.L s.s. "Karlsruhe," to resume his work at the Church Missionary Society's Hospital at Old Cairo, Egypt.

Dr. Lillian Cooper, of Brisbane, has left on a 12 months' trip to England. Dr. Helen Shaw, of Melbourne, is her *locum tenens.*

The estate of the late Dr. Herbert Blaxland, Medical Superintendent of the Gladesville Hospital for the Insane, has been valued for probate purposes at £7000.

Dr. George C. Harper, eldest son of Professor Harper, of St. Andrew's College, Sydney, lately resident surgeon at the Glebe Children's Hospital and the Women's Hospital, returned to Sydney by the steamer "Geelong," after spending a year in hospital work in Edinburgh and in visiting the Continent.

Dr. Angas Johnson has been asked to represent the University of Adelaide at the Zoological Congress to be held at Berne, Switzerland, in August.

Surgeon-Captain A. H. Bennett, S.A., of the Army Medical Corps, has been granted six months' leave of absence from July 1st, for private reasons.

Dr. H. Cumpston has resigned his position as resident surgeon at the Melbourne Hospital.

Dr. G. T. Hankins, the honorary secretary of the New South Wales Branch of the British Medical Association, when in London, has been engaged in the affairs of the British Medical Association in so far as they affect the Australian branches. He proceeded to Vienna to note the latest developments in that city in the treatment of ear, nose and throat disease. Dr. Hankins returns to Sydney about the middle of September.

Dr. A. Stewart, of Dalby, Queensland, returned by the R.M.S. "Miowera" from Vancouver, after an extended tour, having visited a number of places of interest in Canada. He has now returned to Dalby.

Dr. Q. Ercole has left White Cliffs, N.S.W., and commenced practice at Hunter's Hill, Sydney.

Dr. W. L. Watkins, medical superintendent of the Yarra Bend Asylum, Victoria, who otherwise would have retired this month, has received an extension of his term of service until the end of the year.

Dr. W. H. Tomlins has left Kempsey and settled at Alstonville, Richmond River, N.S.W.

Dr. G. A. Walpole has removed from Queenstown, Tas., to Gormanston, Tas.

Dr. J. E. Butchart, who went to New Zealand from Australia some 12 months ago, is leaving for Tasmania.

Dr. Eccles, lately of Mangonui, has now settled in Kawakawa, N.Z., taking up the practice lately held by Dr. Edmonds.

Dr. Leahy has resigned his appointment as resident medical officer at the Napier Hospital, N.Z.

Dr. Hosking, of Masterton, left New Zealand on a tour of the world on July 10th, going home via America and returning via Suez.

Dr. Gibbs, of Nelson, N.Z., has left for a visit to the St. Louis Exposition.

Dr. Van Kerchkoff, a distinguished medical man from Batavia, has just finished a tour of the Otago Lakes, aud is now on a visit to Rotorua, N.Z.

Dr. Clatworthy has resigned his appointment as hon. assistant physician to the Brisbane Hospital.

Dr. Eleanor E. Bourne has resigned her appointment as senior resident medical officer to the Brisbane Hospital.

Dr. A. G. Burrell has resigned his appointment as public vaccinator for the districts of Springburn and Rakaia, N.Z.

Dr. Macfarlane has resigned his position as assistant resident medical officer at the Parkside Lunatic Asylum, Adelaide.

Dr. Goldsmith has resigned his appointment as medical officer of the Palmerston Gaol, South Australia.

Dr. T. M. Hocken is in Hobart for a short visit, and is returning to Dunedin after a tour of over three years round the world.

Mr. Frank C. Madden, F.R.C.S., England, arrived by the R.M.S. "Mongolia" on a visit to Sydney. Mr. F. C. Madden, who graduated at the Scotch College, Melbourne, at present holds the position of professor of surgery at the Egyptian Government School of Medicine, and senior surgeon, Kasr-et-aini Hospital, Cairo.

At the annual meeting of the South Australian Branch of the British Medical Association, Dr. C. W. Hamilton was elected president in succession to Dr. M. Jay.

Dr. Shone, late of Strathalbyn, S.A., has left for Christchurch, New Zealand.

Dr. Park, who has been resident medical officer at Helensburgh, N.S.W. during the past six years, and who was also engaged as colliery doctor, has tendered his resignation.

MEDICAL APPOINTMENTS.

NEW SOUTH WALES.

De Marco, Emilio, M.D., Ch.D. (Bologna), to be Government Medical Officer and Vaccinator at White Cliffs, *vice* Dr. Q. Ercole, resigned.

MacLennan, Johh Norman Emslie, M.B.M.S. (Aber.), to be Government Medical Officer and Vaccinator at Young, *vice* Dr. Alfred Campbell, resigned.

Ross, Alfred Peter, L.R.C.P. (Edin.); L.R.C.S. (Edin.); L.F.P.S. (Glasg.); M.B., M.S. (Edin.), to be Government Medical Officer and Vaccinator at Condobolin, *vice* Dr. W. H. Bracewell, deceased.

VICTORIA.

Allen, Sydney H., F.R.C.S.E., to be Medical Superintendent of the Queen Victoria Memorial Infectious Diseases Hospital, Melbourne.

Denis, C. E., to be Assistant Resident Surgeon to the Women's Hospital, Melbourne.

ling, R. S., to be Chief Medical Referee to the A.M.P. Society
Stirin Victoria, as successor to the late Dr. S. D. Bird.

Sutherland, B. M., to be Assistant Resident Medical Officer of the Midwifery Department of the Women's Hospital, Melbourne.

QUEENSLAND.

Bourne, Eleanor E., M.B., Ch.M. (Syd.), to be Resident Surgeon at the Hospital for Sick Children, Brisbane.

McDonald, James Edward Fancourt, M.B., B.S. (Melb.), to be Acting Assistant Health Officer for the port of Brisbane, and an Acting Health Officer, *vice* Richard Alfred O'Brien, M.B., B.S. (Melb.), resigned.

O'Brien, Richard Alfred, M.B., B.S. (Melb.), to be Health Officer and Medical Officer at Cairns, Visiting Surgeon of the Prison at that place, and a Health Officer, *vice* William Cumming, M.D., deceased.

Ross, Gordon, M.B., B.S. (Melb.), to be Resident Medical Officer at the Brisbane Hospital.

SOUTH AUSTRALIA.

Cudmore, Arthur Murray, M.B., F.R.C.S., to be Surgeon to the Adelaide Hospital.

Campston, T. H. L., M.B., B.S., to be Resident Medical Officer at the Parkside Lunatic Asylum.

Fulton, Thos. Kensington, L.R.C.P. & S., to be Proper Officer of the Immigration Limitation Act, also Medical Officer of the Palmerston Gaol.

Harbison, Wm. Hy., L.R.C.P. & S., to be Proper Officer of the Immigration Limitation Act.

Lamb, Wm., M.B., C.M., to be Public Vaccinator at Mannum.

WEST AUSTRALIA.

Blick, G., Acting Resident Magistrate, Broome, to be Licensing Officer at the port of Broome.

Davy, Thomas George, to be District Medical Officer, Perth.

Finlay, Hunter, to be a member of the Coolgardie Committee of School Management.

Frost, Richard Russell, to be District Medical Officer, Quarantine Officer, and Public Vaccinator at Onslow.

Harvey, Henry F., to be Acting Principal Medical Officer and Officer Controlling Sea Quarantine during the absence on duty of T. H. Lovegrove.

Harvey, H. F., to be a Member of the Board of Management of the Perth Public Hospital during the absence of the Principal Medical Officer (T. H. Lovegrove).

Hungerford, Lancelot Machell Travers, to be District Medical Officer at Geraldton, Quarantine Officer for the port of Champion Bay, Public Vaccinator for the urban and suburban districts of Geraldton and the rural district of Victoria.

Joyce, Caleb, to be Public Vaccinator at Kanowna, *vice* Gilbert M. Teague, resigned.

Lewis, James Brook, to be District Medical Officer and Public Vaccinator, Narrogin; Resident Magistrate, Williams; and Magistrate of Narrogin and Williams Local Courts.

Montgomery, S. H. R., to be the Superintendent and Medical Officer of the Fremantle Lunatic Asylum.

Thom, A. P., to be Acting Officer of Health at Geraldton, *vice* C. B. Elliott, deceased.

TASMANIA.

Damman, G. W., to be a Member of the Local Board of Health at Penguin.

Rodway, F. A., M.B., B.S. (Melb.), to be Junior House Surgeon to the Hobart Hospital.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

The following persons have been duly registered as legally qualified medical practitioners in their respective States:—

NEW SOUTH WALES.

Chisholm, Edwin Claude, M.B., Ch.M. (Syd.), 1904.
Perkins, Richard, M.B., Ch.M. (Syd.), 1904.
Phillips, Arthur Bradridge, M.B., Ch.M. (Syd.), 1904.
Vivers, George Arthur, M.B., Ch.M. (Syd.), 1904.

For Additional Registration.

Bell, Charles Rickard, M.Ch. (Syd.), 1904.

QUEENSLAND.

Gibson, Arthur Horace, Brisbane Hospital, M.B., B.S. (Melb.) 1903.

Hinrichsen, Friedrich, Toowoomba (Staats Exam.), 1897; M.D. (Rostock, Mecklenburg), 1899.

TASMANIA.

Harricks, Francis Meagher, F.R.C.S. (Irel.), 1890.
Redmond, Walker, L.S.A. (Lond.), 1879.
Walker, Herbert Frederic, L.R.C.P. (Edin.), 1903; L.R.C.S. (Edin.), 1903; L.F.P.S. (Glasg.), 1903.

BIRTHS, MARRIAGES AND DEATHS.

BIRTHS.

COOLEY.—On July 8th, at Cleveland-street, Redfern, the wife of P. G. Cooley, M.B.—a son.

CORBIN.—On the 1st July, at Southcott, Woodside (S.A.), the wife of Dr. Cecil Corbin—a daughter.

EWING.—On the 21st June, at "Kirami," Grey-street, St. Kilda, Melbourne, the wife of S. A. Ewing, M.R.C.S. (Eng.)—a son.

HUMPHERY.—On June 12th, at Bellingen, N.S.W., the wife of E. M. Humphery, M.B., Ch.M.—a daughter.

LEE-BROWN.—On the 1st July, the wife of R. Lee-Brown, L.R.C.P., Dandenong, Victoria—a daughter.

MAGAREY.—On the 13th June, at Beulah-road, Norwood, Adelaide, the wife of C. Magarey, M.B. et Ch.B.—a son.

PARK.—On the 28th May, at Tatura, Victoria, the wife of Alex. Park, M.B., B.Ch.—a son.

READ.—On June 9th, at Llanberis, Chatswood, Sydney, the wife of Dr. Clarence Read—a son.

SAWKINS.—On June 11th, at 293 Elizabeth-street, Hyde Park, Sydney, the wife of Dr. F. J. T. Sawkins—a son.

WILSON.—On June 18th, at "Apheta," Nelson-street, Woollahra, the wife of Professor J. T. Wilson, M.B. (Edin.)—a daughter.

MARRIAGES.

SHIRLOW—WHITTLE.—On June 23rd, at the residence of W. H. McClelland, Esq., Comarques, Homebush, Sydney, by the Rev. E. J. Redd, S. S. Shirlow, M.B., Ch.M., to Ethel, youngest daughter of the late H. Whittle, Esq.

SMEATON—WIGLEY.—On the 18th May, at St. Peter's, Glenelg, S.A., by the Rev. Archdeacon Dove, Bronte, third son of T. D. Smeaton, of Blakiston, to Josephine, youngest daughter of Mrs. W. R. Wigley, of St. Leonards, Glenelg, S.A.

DEATHS.

DANSEY.—On June 11th, 1904, Alice Margaret, wife of G. F. Dansey, M.R.C.S. (Eng.), Belmore-street, Burwood, Sydney.

ULBRICH.—On Tuesday, 5th July, at 4 Endsleigh Gardens, London, of appendicitis, Waldemar Harold Ulbrich, M.B., Ch.B., youngest son of N. C. F. Ulbrich, of Williamstown, Melbourne, aged 30 years. (By cable.)

BOOKS RECEIVED.

Martindale and Westcott's Extra Pharmacopœia. Eleventh edition. Med. 24mo. Price, 9s 6d net. 136 Gower-street, London: H. K. Lewis, 1904.

The Calendar, University of Calcutta, 1904.

The Calendar, University of the Cape of Good Hope, 1904.

Journal of Proceedings of the Royal Society of New South Wales. Vol. xxxii. 1903.

The Brisbane Hospital Monthly Chronicle. June, 1904.

Golden Rules of Anæsthesia. By R. J. Probyn-Williams, M.D. Bristol: John Wright & Co. Price, 1s net.

The 84th Annual Report of the Adelaide Hospital.

Manual of Surgery. By Alexis Thomson, M.D., F.R.C.S. (Edin.), and Alexander Miles, M.D., F.R.C.S. (Edin.). Vol. ii., Regional Surgery. Edinburgh and London: Young J. Pentland. Sydney: Angus & Robertson. 1904. Price, 12s 6d per volume.

Our National Recreation Parks. By Nicholas Senn, M.D., Ph.D. With 50 illustrations. Chicago: W. B. Conkey Co. 1904.

LETTERS AND OTHER COMMUNICATIONS RECEIVED FROM CORRESPONDENTS:—

Dr. T. Macpherson, Young: Dr. G. T. Hankins, London; Drs. James Jamieson and P. J. Bull, Melbourne; Dr. E. Champion, Ballarat; Dr. W. Morrison, Ballarat; Dr. H. W. Bryant, Melbourne; Dr. L. D. Parry, Picton; Messrs. Burroughs, Wellcome and Co., Sydney; Mr. G. T. Taylor, Hobart; Dr. A. Palmer, Sydney; Dr. Worrall, Sydney; Dr. Chas. MacLaurin, Sydney; Dr. F. H. Henry, Gympie, Q.; Dr. Naylor, Hobart; Dr. McKay, Sydney; Dr. B. Poulton, Adelaide; Dr. H. C. Taylor-Young, Sydney; Dr. F. A. Pockley, Sydney; the Department of Public Health, Queensland; Dr. H. C. Hinder, Sydney; Dr. E. S. Hawthorne, Mudgee; Dr. W. H. Lang, Corowa; Dr. A. B. Brockway, Brisbane; Dr. Jefferis Turner, Brisbane; Dr. B. Poulton, Adelaide; Mr. C. P. Fisher, Librarian, Library College of Physicians, Philadelphia, U.S.A.; Dr. Scot Skirving, Dr. Anderson, Fremantle; Dr. Springthorpe, Melbourne.

Gratis

AUSTRALASIAN MEDICAL GAZETTE.

EPIDEMIOLOGY OF LEPROSY: A PLEA FOR ACCURACY.*

By J. Ashburton Thompson, M.D., D.P.H., Honorary Fellow of the Incorporated Society of Medical Officers of Health, and President of the Board of Health, Sydney.

I HAD not long studied leprosy records before I formed the opinion that the epidemiology of this disease had been greatly neglected; and as yet I have seen small reason to alter it. The incidence of leprosy on particular areas or countries is described in general terms commonly enough, but critical examination of assertions made concerning it is almost wanting. Anecdotes of individual occurrences of lepra are related in so lively and striking a fashion that they are copied by writer after writer; yet rarely indeed are they supported by the evidential details which, tedious though they are, can alone give them value. And there are many authors, well known to be trustworthy in other fields, who entertain preconceived ideas concerning leprosy so strongly that they seem unable to perceive facts which run counter to them. To dignify all this by calling it unscientific would be to break a butterfly on the wheel.

In another contribution to these *Proceedings* I have incidentally re-directed attention to the remarkably different behaviour of leprosy as regards whites in New South Wales and in Victoria; and I ventured to conclude by calling this difference of behaviour under surrounding circumstances which were identical in the two States, "noteworthy." But it would appear that this estimate is not shared by all leprologists. Thus, Dr. Dom Sauton has the following sentence:—D'après le rapport officielle de la Nouvelle Galles du Sud et le docteur Thompson, il y aurait eu de 1855 a 1894 environ 78 lépreux; la majorité se compose de Chinois qui auraient importé la maladie." (*La Léprose*, p. 78; Naud, Paris, 1902.) As regards the number thus fixed, Dr. Dom Sauton may have his reasons, although I myself have been able to enumerate only 70; but the statement regarding the Chinese, "qu' ils auraient importé la maladie," appears to me to be gravely incomplete. That a considerable number of Chinese, who were already ill, or who had probably received the infection before they had left China, arrived in Victoria at the middle of last century is an established fact; but it would have ætiological interest, and would go to support Dr. Dom Sauton's views, only if it could be shown that the disease had spread from the Chinese to the whites. The question whether it had done so had originally appeared to me to have so much importance that in 1894 I made it the subject of a laborious investigation. The result was published in 1897, and to that work Dr. Dom Sauton has referred; or, if he has not consulted the original, he has yet seen an accurate summary of it which I contributed to the Lepra-conferenz, Berlin, 1897, and which appeared in the *Transactions.* This, I would add, is also shown by the quotation itself, for no other sources of the information he has given exist. Now, the result of that study was not to show that leprosy in Australia originated with the Chinese. It showed, as regards Victoria (*a*), that leprosy was freely present among the Chinese from about the date mentioned; (*b*) that the disease never did attack the whites in that State, and (*c*) that it died away (save for an occasional case, still in Chinese only) before the year 1893, when restrictive measures first became law. And, as regards New South Wales, it showed that cases in whites had preceded recorded cases in coloured people. The nett result of the investigation was that although there might possibly have been Chinese lepers in both States from the beginning, yet the disease never attacked whites in Victoria, and consequently was not there transmitted by Chinese. The fact, it will be noticed, is very different from Dr. Dom Sauton's inadvertent representation of it.

Dr. Jeanselme has gone even further. He has written: "J. Ashburton Thompson qui nous a fourni ces chiffres, pense qu' en Australie la transmission de la lèpre aux blancs est liée a l'émigration Chinoise." ("Les courants de l'émigration et l'expansion de la lèpre," *Gazette des Hôpitaux*, April 19th, 1903, reprinted in Lepra, III., p. 191). I hasten to acknowledge that my opinion is "a poor thing"; yet I must finish the quotation, and add "but mine own." It will be seen from what has just been written above that the view ascribed to me by Dr. Jeanselme is exactly contrary to that which I had expressed formally, and in quite unmistakable language, in the work referred to; further, that the ascertained facts themselves—not my opinion of them—run, as far as they go, counter to Dr. Jeanselme's statement. I will not venture to add that such inaccuracies are to be met with only in writings on leprosy; but I may hazard the remark that they are tolerated only in that connection, and, most singularly, are found in papers by gentlemen who, at the same time, are engaged in doing work of the most exact kind in other fields of observation.

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*A paper contributed to the Proceedings of the International Congress of Dermatology, Berlin, 1904.

This latter remark applies forcibly to Dr. Jeanselme, for whom, as a clinician, I entertain that respect which must be generally accorded him. Yet in the paper mentioned above he made two important statements concerning the Hawaiian Islands which call for notice in this place. He inserted in it a long string of data and of figures taken from "Leprosy in Hawaii: A Critical Study," a paper which also appeared in the *Transactions of the Lepra-conferenz*, Berlin, 1897. He did not, it is true, in this case mention the source on which he had drawn, and, as leprosy in Hawaii has been an easy subject for multitudinous writers these many years, it may be supposed that there are a hundred other places in which he might have found them. But, while comparison establishes the source beyond any doubt, it is further the case that many of the data mentioned were first unearthed for that work and, for the rest, were at all events there for the first time collected, distinguished into established and non-established data, and arranged in their physical and logical relations. So that he had before him much more information than he quoted. Now, in the first place, Dr. Jeanselme began his notes with the following assertion: "Les notions précises concernant la lèpre dans cette archipel ne remontent pas au delà de 1861 époque à laquelle Doirron au cours de ses tournées vaccinales parmi les natifs des environs de Honolulu constate 'plusieurs cas d'une maladie ressemblant à la lèpre.' . . . . ." I would ask any reader who will take the trouble to refer to Sections VII. and VIII. to say whether this statement furnished the first "notions précises concernant la lèpre dans cette archipel," and whether cases of the disease had not been recognised many years before? But the expression "notions précises" is a very strong one. On what was it founded? The reader will be surprised to learn the truth. Doirron was not a physician; he was one of the lay vaccinators who were still employed by the Government at that date. Nothing at all exists to show whether he knew leprosy or not; and nothing exists to show that any knowledge of it which he may have had was not acquired in Honolulu itself. There Dr. Hillebrand had already been studying the disease for some years, and in 1863 thought well formally to pronounce it, for general information, to be "true Oriental leprosy," at a public meeting at which the King was present. But what was this piece of "exact information?" Was it an official statement? Not at all. Was it even a substantial statement? Nothing of the kind. It was merely an item in a newspaper, the *Pacific Commercial Advertiser*, October 24th, 1861, which extended to three lines, and which began: "Mr. Doirron tells us, etc." Can such an item be relied upon as evidence of anything whatever except that in those days editors collected what is commonly accepted as news much in the same way as they do to-day? The information, however, though only good for what it was worth, is probably correct enough; no doubt Doirron "told them"—only, *what Doirron knew* is an unfathomed mystery. The further error of saying that this was the first trustworthy information concerning leprosy in Hawaii is entirely original with Dr. Jeanselme.

I appeal to Dr. Jeanselme — to him, first of all — to say whether in this way the ætiology of an obscure disease is likely to be cleared up? This is the point to which I wish to draw attention. To err is human; the example is of little importance in itself; I have no quarrel with Dr. Jeanselme. Such lapses would be impossible to eminent *savants* had the epidemiology of leprosy once received the serious attention which has been given to that of every other disease.

The second instance is the following. The account concluded as follows:—"Bien que la preuve rigoureuse fasse défaut, on garde l'impression, dit Arning, que le facteur essentielle dans cette epidémie a été l'introduction de l'élément Chinois dans la population Hawaiienne." Now, Dr. Arning arrived in Hawaii in November, 1883, and he made his last report to Government in November, 1885; during these two years he was occupied with leprosy, which he had gone there to study. I have not gathered from his writings that he seriously examined its epidemiology, or that he did more in them under that head than repeat the well-known accounts which were current among the people; and I would point out that this matter is quite distinct from the pathology and therapeutics of lepra, which latter subjects profitably (and, no doubt, sufficiently) occupied his time. Well, on this matter of origin of the disease with Chinese I join issue with him. It may have been as his impression has led him to speak; but I say that evidence in support is totally wanting. Impressions are very well in their place; in epidemiology they are worse than useless.

But to ascribe the introduction and subsequent spread of leprosy to Chinese has become a *parti pris*, so that (to refer only to a work already quoted above) Dr. Dom Sauton, at page 150, after having declared the case of Ahia to be the first case of leprosy in Hawaii "dûment constaté," forthwith dubs Ahia a Chinese! The usual theory, and the author's views, require that he should have belonged to that nation, no doubt. But, as a matter of fact, Ahia (whose name is Hawaiian, and not at all like a Chinese name) was a full-blood aboriginal; he lived at Kapuukolo—two words which mean "the black sea," and which had reference, not to a feature of European geography, but to a monstrous quagmire which obstructed the high road near his dwelling. He had important connections, nevertheless, for a white man was his brother-in-law; and, having been a respectable tailor, he attained even to the dignity of Court tailor—a position which he was obliged by his illness and the natural objections of King Kamehameha III to relinquish. There is no doubt at all as to who he was, nor as to when his case was recorded; namely, in 1844, not in 1853 as Dr. Dom Sauton supposes. The case which has more commonly been taken for the first, however, is that of Na'ea. After verifying and comparing certain dates I conjectured that Ahia's might have begun earlier, but this was conjecture merely, plainly indicated by me to be so. No one has ever ventured to call this man a Chinese — owing, perhaps, in part to his name, which is characteristically Polynesian, or, rather, Mahori. However, he also was perfectly well known. He was a minor chief, though the reputed father of Queen Emma. But had Dr. Dom Sauton followed the more usual custom, and named this latter as the first case "dûment constaté," I should still have had to point out that I had found reasons for denying it that status, most important in relation to its date, and the beginnings of leprosy in Hawaii. I will here merely mention this point, on which I lay some stress; it is plain enough that about 1840 missionaries began to awake to the probability that the disgusting cases of illness which they had seen from the earliest days were not all of them caused by syphilis, to which they had at first invariably ascribed them. I cannot agree, either, with a writer, to whom I am not able to make exact reference, who has said, in the course of speculations on the manner in which leprosy is diffused, that, after all, the important point is that the disease assumed epidemic proportions in Hawaii about the middle of last century, not the question whether it had been present earlier in some few cases. It is precisely the latter which has interest and importance; for all that available evidence warrants is a statement that leprosy may be endemic in a country and yet become active, and assume the epidemic form, only at long intervals.

Indeed, the question concerning leprosy in Norway itself which seems most urgently to require answer is not why the disease declined during the latter half of last century, but why it increased so greatly during the earlier half.[*] Even Mr. Jonathan Hutchinson has overlooked this point; nor will any theory of leprosy thus far propounded elucidate it unless, indeed, it be the telluric hypothesis on which I wrote at length in 1895. (*Public Health*, vii., p. 343). It has been the illogical, yet almost invariable custom to accept the presence of many cases on any area as evidence of *maintenance* and diffusion by communication with the sick; now, at last, very tardily, attention seems to be beginning to turn to cases which have arisen beyond reasonable doubt apart from direct communication with any previous case. Soon after beginning to trace new example which occurred in New South Wales in its history and connections, with assistance of every resource which a very highly organised system of Government could lend, I discovered that such cases had occurred there—cases on which I shall have something to say by-and-bye, though I fear I shall be unable to present them to this Conference; and in 1894 I devised the following useful phrase to indicate them: "Persons . . . . who have never been in conscious contact with any leper." (See "A Contribution to the History of Leprosy in Australia," p. 75; Macmillans, London, 1897; and New Sydenham Society's reprints.)

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[*] The earliest notice of leprosy in Norway is said to date back to the XIIIth century. There are no records which show to what extent it was present at the end of the XVIIIth, and the beginning of the XIXth. But it so increased as to begin to attract attention during the third and fourth decades of the XIXth century, and continued so to increase that a law intended to restrain it was passed in the sixth decade. Some years thereafter approach of another period of quiescence began to be descried—whether consequent on operation of the law or merely concurrently with it I have elsewhere discussed.

I fear there are many who will think I have made too much of these incidents; and, as regards the incidents themselves, that may well be so. But one must take his examples where he finds them, and I have cited these, not for their own sake (though some of them have importance) but for the illustration they afford of the neglect in which the epidemiology of this disease has so long languished, and in which it still remains. I venture to say that there is a superabundance of gossip about leprosy and its incidence on peoples, but very little knowledge, except indeed, of its broadest features. Its ætiology is yet unrevealed; or, if the current opinion should turn out to be correct, this is as yet unestablished, and a plausible inference merely. I am convinced that this is mainly due to neglect of its epidemiology properly so called—of the tedious, cautious, and exact methods of investigation in which epidemiology either consists, or else is not.

NOTES ON BUBONIC PLAGUE.

By T. L. Anderson, M.D. (Melb.), Fremantle, West Australia.

The following notes are taken from observations made in connection with the cases of bubonic plague, 43 in number, met with in West Australia whilst acting as special medical officer to the Central Board of Health.

Incubation Period.—Owing to the uncertainty as to when the patients received, or were exposed to infection, this was always a difficult point to settle. In one case, however, this can be fairly definitely determined. The patient, a carter, living in Fremantle, which was clear of infection at the time, had been so for nine months and remained so for 14 months after this case occurred, visited Perth with goods, and went to various shops in the rat-infected area there. This was on March 19th, 1903. On the evening of the 21st he vomited after his tea, and felt ill. On the following day he was unable to go to his work, and in the evening complained of headache and pain in the inguinal region. He was seen by a medical man, who found his temperature 105°, and some enlargement and tenderness in the upper femoral glandular region. This is the only case in which a definite incubation period could be arrived at, and proved to be 48 hours. Careful inquiry and observation has led to the opinion that in the ordinary bubonic type the incubation period varies from two to three days.

As regards the incubation period, reference is made by Dr. Barnett[1] to two cases on board ship in which he fixes this period at 18 days. To make this period fit in, he presupposes that his ship received the infection from Perth, when she called at Fremantle. The writer[2] replied to this report, showing that the data on which the incubation period was fixed were quite incorrect, and that it was extremely unlikely that the incubation period ever extended to such a length of time.

Signs and Symptoms.—It may be said that very often at the onset of a severe attack of plague there are no very special symptoms to distinguish plague from other acute febrile conditions; but with the formation of a bubo we have something suggestive and distinctive to go on. As a rule, at the onset the disease is regarded as influenza or typhoid. Headache and pain in the back are constantly met with. The tongue is thickly coated with a white fur, and is red at the tip and sides, and closely resembles that met with in typhoid. The pulse and respiration are quickened. Usually the temperature rises rapidly, and at the end of 24 hours is 104° to 105°. This sudden onset is an important factor in distinguishing from typhoid, and should be constantly borne in mind. Vomiting frequently occurs at the onset, but, as a rule, does not persist. Constipation is also met with in the early stages. The more special signs of the disease may then be noted in certain cases, such as infection of the eyes, and some interference with speech. The latter, when present, is very significant, and is, indeed, almost diagnostic—the speech being of a hesitating or slurring character. In one case it was so marked as to give the impression that there was cleft palate present. If the patient is seen walking, then valuable information is frequently gained, as some degree of ataxia or instability, resembling that of alcohol, is often noted. A rigor at the onset is not common, though there may be some slight shivering or chilly feelings.

Bubo Formation.—This is the striking and characteristic sign met with in the great majority of cases, giving the name to a type of of the disease, and serving as an important point in the clinical diagnosis. The time at which the bubo appears is very variable, but, as a rule, it can be distinctly felt 24 to 48 hours after the onset. The earliest time noted was 12 hours and the longest was five days. As a rule the patient does not come under observation until the bubo has formed, so that no correct idea can be gained as to the time at which the bubo first appeared. In four of the cases the patients were under observation right from the onset, so that the formation of the bubo could be closely studied. The first thing noticed by the patient was pain both on moving the affected part and on pressure ; there was no throbbing, as in acute inflammatory affections, and so long as the part was at rest, the patient was easy. On examining the patient at this stage all that could be felt was a thickening with no definite rounded outline, and giving the sensation of one or two thickened cords. Then in from 6 to 24 hours the thickening became more rounded, and the corded feeling lost. The swelling became much more painful on pressure, and another sign which was regarded as of diagnostic significance occurred, viz., the presence of a faint blush on the skin over the affected part. This last sign was noted in these cases, and is regarded as of considerable diagnostic importance. The bubo attained its usual size in two of the cases 24 hours after onset, and in the other two in 48 hours. The bubo attains usually the size of a flattened walnut, is usually diffuse at the edges, and is very sensitive to the touch ; this last symptom is very characteristic of the plague bubo. In those cases in which the bubo forms in the femoral or inguinal regions, one constant and unvarying sign will be found, which is regarded by the writer as absolutely diagnostic of a plague bubo : this is swelling and thickening in the iliac fossa on the same side, coupled with tenderness on firm pressure. This sign has always been looked for since the post-mortem on the first case showed great infiltration and swelling along the external iliac vessels. Having noted it in the few cases of plague in West Australia, it was carefully looked for whilst studying plague in India, and was constantly found. The writer, from clinical and post-mortem experience, has formed the opinion that if one can say any one sign is pathognomonic of one special disease, then this iliac thickening is pathognomonic of bubonic plague in those cases in which the bubo is in the femoral or inguinal regions. The sign is regarded as of great value in those cases where a rapid and certain clinical diagnosis is required and where no bacteriological examination can be made. It is a sign that any practitioner can find, and so enable him to make an early and correct diagnosis. This sign has been looked for in the ordinary bubo cases met with in practice, but has never been found.

In the great majority of cases the bubo is in the inguinal region, either in the perpendicular or femoral chain of glands, or in the horizontal or inguinal chain. This localisation of the bubo is not altogether an accident, but is due to the following :—

1. Infection most frequently occurs in lower limbs.
2. The inguinal glandular system drains a larger area of skin than other glandular systems.

The actual area of skin drained by the various glandular systems has been found to be as follow :—

Inguinal,	6261	sq. cms.;	proportion of	5
Axillary,	3244	,,	,,	1.8
Cervical,	1259	,,	,,	1.0

In the cases of this series the buboes were distributed as follows :—

Inguinal, 35 cases,	81%	9
Axillary, 4 cases,	9%	1
Cervical, 4 cases,	9%	1

It is usually held that the bubo forms in the region in which the infection occurs, so that in the case of cervical buboes it is probable that infection occurs at times through the tonsil.

In those cases in which multiple buboes form, there is, as a rule, a definite interval between the formation of the primary and secondary buboes, but the writer has never been able to settle the point whether the secondary bubo has been due to external infection or to the infection of the gland through the systemic circulation.

Course of the Disease.—It can be stated that in the very large majority of cases the patient is either dead or out of danger in seven days from onset of attack, so that the disease is essentially an acute condition. It has been noted that the temperature rises rapidly at the onset, usually to 104° to 105°. Two cases were 105.8° when first seen. For three to four days it varies from 102° to 104°; then there is usually a rapid fall to about normal, with again a rise to 102° to 103°, and again a fall to normal about the seventh day. This pseudo crisis about the fourth day is very constant, and is often coincident with the bubo attaining its maximum size. The highest temperature met with was 106.8°, one hour before death. The initial headache does not persist for any time. Insomnia is very frequently met with, whilst in severe cases delirium is constantly present, and very troublesome and intractable to deal with. In no other disease has the writer seen such severe delirium. It depends partly on toxæmia and frequently also on commencing heart failure. Vomiting, when persistent, is of grave omen, as is also the occurrence of severe diarrhœa. Retention of urine has been met with, but is not common. Epistaxis was noted in only one case.

Pulse and respiration are usually dependent in early stage on the temperature; but in all severe attacks the pulse rate soon rises, and tends to become very rapid. The tendency to heart failure is most marked, and this organ requires the most careful watching. The disease seems to exert a most severe effect on the heart muscle, and heart failure may occur with appalling rapidity. The pulse rate varies from 90 to 160. In one case it was never below 120, and was at times 150 to 160.

Skin.—In certain cases a rash was noticed on the trunk and limbs. This rash consisted of small, dark red spots, just to be felt by the finger, and not wholly disappearing on pressure. The spots did not appear till the fourth day, and came out in successive crops, each crop fading away in two days. The rash was found in 25 per cent. of the cases, so that more extended observation is necessary to determine whether it is distinctive of the disease. Only once was a petechial rash seen, and this appeared 12 hours before death.

As a rule there are no chest symptoms, unless a secondary pneumonia occurs, and this is shown by increased respiration, cough, and expectoration of thick, yellowish white sputum, or thin, watery clear sputum, with the physical signs of one or more small areas of consolidation towards the bases. In only one case did this complication occur, and the sputum showed cocci and a few plague bacilli, not the enormous number met with in the primary pneumonic form. Frequent examinations of the bases is necessary to discover any lung complication, as quick respiration more often means heart failure than the development of broncho-pneumonia.

Course of the Bubo.—In the great majority of cases that recover, the bubo attains its maximum size in four to five days, then remains stationary for about 14 days, and slowly subsides, but it can be felt even up to one month after the temperature is normal. In fatal cases, the bubo rapidly enlarges, particularly when in inguinal region, and becomes very tender to the touch. In a minority of the cases suppuration occurs in the bubo, and this is usually denoted by slight softening in the centre, and, unlike suppuration as a rule, it is not accompanied by a rise in temperature, but occurs about the time the temperature has reached normal. The occurrence of a rise in temperature after this has reached normal usually denotes some pus absorption, and should not occur, as it shows that the early signs of pus formation have been overlooked. This suppurative fever was often noticed in India, and in certain cases seemed to have caused death. Occasionally the bubo may become soft and semi-fluctuant, giving rise to the sensation of pus formation, but no pus was found on incision, so that it was found a good rule to insert an aseptic hypodermic needle in all softening buboes and draw off some material to make sure whether suppuration was occurring or not. One point in the microscopic examination of material from a bubo is that in the early stages the bacillus shows very little tendency to bi-polar staining, whilst, when examined about seventh day or later, a much more marked tendency is noticeable. This, taken in conjunction with the fact that the fresher the culture the less the bi-polar staining, seems to point to the fact that the more marked bi-polar staining denotes a lessened virulence of the bacillus, but sufficient work has not yet been done to settle this conclusively. The bacillus can usually be found on microscopic examination of the pus up to the tenth day, and has been found in one case up to the fifteenth day. Usually the larger part of the gland is destroyed and comes away in sloughs. In no case was there any marked delay in healing, no case taking longer than 18 days to heal up.

Diagnosis.—Owing to the ease with which the bacillus can be obtained from the bubo for direct examination and culture, the diagnosis of plague can be absolutely settled by microscopic examination and inoculation experiments. In the ordinary bubonic case the clinical picture is so clear that no mistake should be made. In those cases in which no bubo develops at all, or before it develops, the diagnosis clinically is much more difficult and can only be settled finally by the microscope. In all cases of illness, with the formation of a bubo without obvious cause, plague should always be suspected and microscopic examinations made. In Australia, the final diagnosis always rests with the Public Health Officer, and a short account of the procedure adopted here is given. All the local practitioners are notified each year of the possibility of plague occurring, and are asked to report at once any case they deem suspicious. On such report, the special plague officer examines the patient, and if a bubo is present, some material is obtained from the gland and examined after being stained with an aniline dye. If no bubo is present, blood is taken from the finger for examination. In the majority of cases the smear examination is positive, and the patient is then removed to the isolation hospital. In the majority of cases the clinical diagnosis can be made with certainty, but the microscopic examination is carried out in addition. In certain cases the bacillus may not be found in the smear, so that a culture has to be made, and at the end of 20 to 24 hours the culture can be microscopically examined to settle the diagnosis. In all cases of bubo in the femoral or inguinal region, the presence of iliac swelling and tenderness will always be found, and, as before remarked, is absolutely diagnostic of plague.

Mode of Infection.—The belief that the chief means by which man is infected with plague is by the bite of the flea is becoming more and more firmly established. The valuable work carried out by Tidswell and Elkington in establishing this theory since its introduction by Simond, and the important observations by Ashburton Thompson, recorded elsewhere, have placed the subject on a sound, scientific basis. No doubt there is much more work to be done before the question can be conclusively settled, but in the future it will probably be found that the present ideas as to the methods of infection and transmission of plague will be as completely altered as were those regarding malaria, after the discovery of the relation of the mosquitoes to that disease.

Prognosis.—This is undoubtedly grave. The average white mortality is 30 per cent. In Asiatic races and coloured races generally the mortality varies from 70 to 98 per cent. There is a race susceptibility to the disease, but what this exactly depends on is hard to say.

In the appendix a table is attached showing the mortality amongst Europeans in various parts of the world, and amongst coloured races. In all cases the condition of the heart is the guide to the prognosis. Once the pulse gets above 120 there is danger, and the patient is in a serious condition. Multiple buboes increase the gravity of the condition. Vomiting and diarrhœa are ominous. Delirium is grave, in so far as it indicates profound toxæmia, and commencing heart failure. Protection afforded by an attack is by no means absolute. The writer saw one case in India which had a severe attack in March, 1903, and then came into hospital on October 28th, 1903, and died in 48 hours; a post-mortem made by him showing typical plague appearances and giving typical cultures.

Treatment.—The chief indication in the treatment is to watch closely the condition of the heart. Absolute rest in bed and good nursing are essential. Light and nourishing food at frequent intervals. Strychnine and digitalin hypodermically have been chiefly relied on. In all severe cases, strychnine $\frac{1}{40}$ gr. every four hours is given from the start. Diffusible spirits, such as sp. ammon. arom., m. x-xx ; sp. etheris., m. x-xx ; sp. chlor., m. xv-xx, with usually tr. bellad. m. ii-iii, are given by the mouth, when any signs of heart failure appear. The following forms a very useful stock mixture for use in hospital, and it is very advisable to give a dose of this before removing a patient to hospital: —R: Tr. bellad., m. v ; tr. digital., m. v.; liq. strychnin. hydrochl., m. iii ; sp. etheris, m. xx ; liq. am. acet., dr.i; aq. chlorf. ad. oz.i. ; dr.i, 6-8 hor. An initial dose of calomel 5 gr. is advisable if there is constipation. Sponging and wet packing are used for temperature and delirium. Antipyretics, like phenacetin and phenazone, are never given. For the bubo, an application of ichthyol dr. ii, ext. bellad. dr. iii, glycerin ad oz. i, is used night and morning, and a boric foment applied over this every four hours. The bubo is carefully watched for any softening, and opened as soon as any pus has formed. The treatment by large doses of carbolic acid recently reported[3] has not been tried. The number of cases reported is too small to form any opinion on, and from the clinical account of the cases it seems very probable they would have recovered on the ordinary stimulant treatment. The delirium is usually very difficult to control, and the best results have followed the use of hyoscine gr. $\frac{1}{100}$-$\frac{1}{75}$ hypodermically given with strychnin gr. $\frac{1}{40}$ to counteract any heart depression from the former. If morphia $\frac{1}{4}$ gr. fails, it is not advisable to repeat it at a short interval, as it is undoubtedly a heart depressant in this disease. Potass. bromid., chloral, and nepenthe have been given, but with very little benefit.

It is possible that systematic cold bathing would be very beneficial in this condition, as in typhoid, and it is the intention of the writer to treat the next series of cases on this line. In certain cases the rectal injection of 4 to 6 oz. of saline solution every four to six hours seemed to the writer to have a most beneficial effect, particularly in steadying the pulse, allaying thirst, and increasing the flow of urine, and is now used as part of the routine treatment of severe cases.

Serum Treatment.—This is the rational treatment, provided an efficient serum can be obtained, but so far this has not been done.

Yersin's Serum.—This has not been used in West Australia. Sydney experience has been disappointing, whilst in Brisbane it was thought to have been very beneficial in certain cases. In India, when tried in a large number of cases by Yersin himself, the results were very disappointing.

Lustig's Serum.—This has been the most extensively used of all the sera. It consists of the blood serum of the horse, after immunisation by the method devised by Lustig and Galeotti. The results have been carefully compiled and analysed by Choksy.[4] The average dose is 20 c.c., and it is given subcutaneously in the arm or thigh. The serum was afterwards prepared in India during 1898 and 1899, but since then it has been abandoned. Given in suitable cases and in sufficient doses, it is probably the most valuable of all the sera.

A table of results from the use of this serum is appended, as they are the most complete on record of treatment by serum in this disease.

Protective Inoculation.—Haffkine's prophylactic is acknowledged to be a distinct preventive against infection, and also to favourably influence the course of the disease should subsequent infection occur. In West Australia 4000 persons have been inoculated from 1900 to 1903 without any serious results. In six cases suppuration occurred, whilst in a limited number of others an erysipelatous condition of the arm developed, usually five to six days after inoculation when first symptoms had subsided and the arm had been rather freely used. The arm became suddenly hot, swollen, and tender. Temperature rose to 104° to 105°, with febrile symptoms. If properly treated with an application of ung. ichthyol and boric foments it soon subsided. In three cases inoculation was performed when the patient was in the incubation stage of plague, unknown at the time. One of these cases ended fatally. Two were inoculated at 3 p.m. on a certain day, and the next night were found to have temperatures of 105.8° each, and subsequently developed buboes. The third case was inoculated at midday, and felt ill the same night and vomited. Next day the temperature was found to be 105°, and a bubo developed on the fifth day from the onset. The fatal case was an Austrian, who was excessively nervous and had the fear of impending death on him from the start, and would undoubtedly have died in any case. As regards the other two cases, the inoculation did not seem to increase the severity of the disease. Thompson[5] gives a table of 13 persons inoculated when they were possibly incubating plague, and states they all recovered and had conspicuously light attacks. Bannerman[6] deals very fully with the question of the effect of inoculation during the incubation stage, and thinks that inoculation may possibly abort an attack and shows very conclusively that inoculation does not unfavourably influence the attack, but is more likely to lessen its severity.

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Government Grant to Melbourne University.—In the Victorian Legislative Assembly last month an item of £10,000 towards paying off the liabilities of the Melbourne University was passed, after explanation by the Premier that the Government were in a measure responsible.

AIDS TO DIAGNOSIS IN RENAL DISEASE.

By R. Steer-Bowker, M.R.C.S., L.R.C.P., Hon. Surgeon to Sydney Hospital, Sydney.

IN adopting the title of "Aids to Diagnosis in Renal Disease," I mean to speak of those newer aids and recent improvements which help us, more particularly in judging of a case's suitability for operation, of giving us an idea of how much operation the case will stand, of judging in indefinite cases whether one side only is affected, which side, and to what extent. Thanks to recent inventions and improvements in old methods, we are to-day in a much better position than we were a few years ago. These methods are, no doubt, well known to some of you, but my excuse for speaking on the subject is that it may interest some of the members who do not know of them, and even some of those who are better up in the matter may be interested in a couple of new instruments which I have to show. I will take, for example, a case which has been handed on to a surgeon by a physician, with a diagnosis, made by the symptoms, and an examination of the urine, of probable stone in the kidney. This diagnosis is quite sufficient for the general physician, but not so for the surgeon, who has to operate. He has to make a more elaborate diagnosis, both for the sake of his reputation and the well-being of the patient.

A few years ago this diagnosis was quite sufficient, for pain was the only guide as to which side was affected, and the operation might disclose nothing there and be termed "negative exploration," the term used by my old teacher, Mr. Henry Morris, in his Hunterian lecture of 1898. But means of unilateral diagnosis have been on the march since I saw him remove the first stone by a premeditated nephrolithotomy. Another gentleman, at present in this room, will bear me out that we regarded him with reverential awe as he held that stone in his fingers.

Here the surgeon, the pathologist, and the radiologist have to be "hand-in-glove," and work together. Now, what is it we want to know?

1. If the cause of the trouble is a stone, which side is it on? Is it on the side of the pain? or there may be pain on both sides, or no pain at all, or pain in some remote part (such as the heel, as it was in a case I was reading of the other day). For pain is no absolute guide, and may be the result of "reno-renal reflex." I can quote two cases in my own practice.

2. If both sides are affected, which side is most affected?

3. Are both sides so affected as to render operation more than ordinarily dangerous?

4. If it should be advisable to remove one kidney, is the other functionating sufficiently to carry on the work of both? Some years ago I removed a kidney for sarcoma, without *knowing* how the other kidney was working, and I well remember my anxiety next day until I heard my house surgeon reply to my question as to how that patient was.

These matters should not be left to chance, for at the present time, though our methods are not perhaps perfect, still they are so good that a patient has a right to demand that a surgeon who undertakes to operate upon a kidney shall understand them, and have employed them sufficiently to know fairly well the functional activity, not only of the organ he is operating upon, but of its fellow.

Now as to the aids themselves.—It does not do to take the evidence of any one by itself; but this should be supported by other evidence, for, as in symptoms, no one by itself is always infallible, but must be taken as supporting other evidence.

Class I.—Those by means of which we can determine which side is affected: (*a*) radiography; (*b*) cystoscopic examination; (*c*) ureteral catheterisation; (*d*) ureteral exploration with wax-tipped catheter; (*e*) massage; (*f*) segregation. I leave out palpation and the use of the phonendoscope as generally being impracticable.

Class II.—Those by means of which we can decide as to the functional activity of each kidney separately: (*a*) injection of methylene blue and observing with cystoscope (chromo-cystoscopy) and chromo-segregation; (*b*) phloridzin test; (*c*) cryoscopy; (*d*) A. E. Wright and Kilner's "Hæmolytic Index." The estimation of the total amount of urea, within normal limits, varies too greatly to be of much value (20 to 35 grammes daily).

Now to take these methods separately.

Class I.—(*a*) *Radiography.*—Like other means, this is liable to error, and we cannot place too much reliance on its findings, but must have them corroborated. Where there is a stone, the X-ray picture taken and interpreted by a skilled radiographer rarely fails to show it; but even when taken by an expert, it at times does fail.

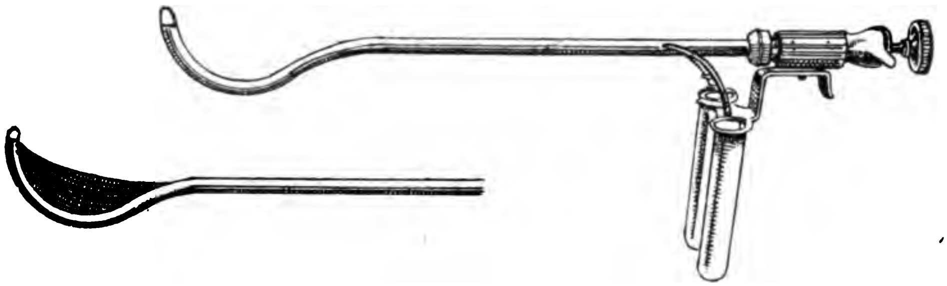
(*b*) *The cystoscope* and (*c*) *ureteral catheterisation.*—For diagnosis of kidney disease, unless in an exceptional case or when for confirmatory purposes. we use the indigo-carmine test, a cystoscope examination is not necessary. We read of and hear people talk glibly of "catheterisation of the ureter" as though this were an easy and simple matter. This it most emphatically is not. There are many bladders in which it is impossible for the most skilled to even find the ureters, much less to pass a ureter-catheter. Spooner says, "of 12 men who finished Casper's post-graduate course on cystoscopy last year, *only two succeeded in catheterising a ureter.*" Some of these had already studied the subject at other clinics; besides which the instrument is a hard one to sterilise, especially by heat, and therefore liable to set up trouble in a healthy bladder, and where the catheter can be passed there is danger of setting up trouble in the ureter or even in a healthy kidney. Of course, if we had no other means of getting the urine separately, one would have to use this method; but when we consider the difficulties, dangers, and, at times, impossibilities of this method, segregation, in its simplest form, though still liable to error, doubtless is the better plan, especially as we can control its errors by other tests. The cystoscope is, however, a valuable instrument for observing the interior of the bladder, but has to be used with care, for in the ordinary instrument of Nitze and others, the lamp becomes hot, and people, I fancy, have often discovered ulcers which, in their earnest endeavours to see all that there is to be seen, they have themselves manufactured. However, there have lately been some improvements in this respect. I show you here a good instrument, that of Brandsford-Lewis, which has a cold lamp, direct view of the field, air distension of the bladder, suction apparatus for aspirating any fluid from the bladder, and a very excellent and portable battery for working it.

(*d*) *Ureteral exploration with wax-tipped bougies* is not very practicable, and only advocated by Howard Kelly, who originated it.

(*e*) *Massage of the kidneys.*—Giordano and Nicolish have lately been massaging the region of the kidney and ureters, instead of using the segregator, first cleansing out the bladder, then massaging first one side and collecting the urine, and then the other; but this is a crude, if not impracticable method. Though, whilst the segregator is in place I have found it help where the fluid has been thick with pus.

(*f*) *Segregation. — Harris' segregator, Downes' segregator, Luys' segregator.* Dr. A. Tuckmann, according to Mr. Morris, as far back as 1874, had an idea of separating the urines, and by means of a ureter forceps seized and occluded one ureter in the bladder whilst he collected the urine from the other. After this Simon, Grünfeld, Newman, Pawlik, and Kelly all tried different methods. It remained for Harris, of Chicago, in 1898, to invent the first really practical "segregator." This was a useful instrument, but was large (No. 16 English), cumbersome, and the openings in the catheter too small and easily blocked, besides requiring the passage of another part of the instrument into the rectum or vagina to form a septum. Downes, also an American, soon made an improvement upon this instrument. Its calibre is smaller (No. 14 English), has a larger eye in the catheter, is of a better shape, but still he did not get rid of the necessity of passing a vaginal or a rectal piece for the formation of the septum. This necessity has always been a drawback to the use of these instruments, and I have found, an intolerable nuisance to patients. I show you both of these instruments. Two new instruments have recently been invented, one by F. Cathelin, of the Necker Hospital, Paris, which I have sent for, but which is both more complicated and more expensive than the one which I will describe and show to you, and with which I have been working for the last five or six months. It is the invention of Dr. Georges Luys, assistant at the Lariboisier Hospital. This instrument requires no extra piece to form a septum. The instrument having been passed into the bladder, the patient is not further bothered, and avoids the most disagreeable and painful pressure of the rectal or vaginal piece. The size is smaller than either the Harris or Downes' instrument (No. 13 English). The curve looks formidable and difficult to pass, but I have not found this to be the case, as one with care can pass it easily—in fact, I have segregated the urine of a man who had had the Harris used on him and had to have an anæsthetic, he complained so bitterly. This instrument, he said, caused him but little inconvenience, either in passing or whilst it was in. (I had instilled some cocain and adrenalin into the deep urethra.) I show you the instrument. It is made up of two flattened catheters, surrounding a flattened bar, which is fixed to a handle, not unlike that of a lithotrite, furnished with a wheel, by means of which a small rod, terminating in a chain fixed to the distal part of the central piece, can be drawn upon so as to tighten or release the chain at will. The catheters are fixed to the central rod and to each other at the distal end by means of a screw cap. To use the instrument, an indiarubber tube (made of pure rubber, specially prepared)—the top having been unscrewed and the catheters removed —is drawn over the central chain and rod, the chain being relaxed and lying in the curve of the instrument—the catheters are replaced, and fixed by the screw-cap, then by means of the wheel the chain can be drawn upon, and the rubber stretched so as to form a diaphragm extending across the curve of the instrument and separating the two catheters, which are perforated on their inner surface and upper edges along the curve. The central bar protrudes somewhat below the convexity of the curve, so as to rest on the floor of the bladder and prevent urine dribbling underneath. To pass this instrument, some fluid is passed into the bladder, the deep urethra cocainised, the chain relaxed, the instrument passed, and then the diaphragm raised to the required extent by giving so many turns to the wheel, the curve of the catheters resting on the floor of the bladder between the ureteral openings, with the septum raised between them, the fluid allowed to run away, and then the segregation commences. Luys, in using the instrument, brings the patient into a sitting posture, by means of a bedrest, as he thinks that then the curve fits the bladder floor more accurately. Two glass tubes for catching the urine are held in position under the mouths of the catheters by means of a metal "carrier" working on a slot. This instrument, I think, renders both the Harris and Downes' instruments obsolete; can be used quickly and painlessly, so much so, that it may be used as an ordinary routine, where necessary, and makes segregation of the urine a simple matter for both patient and surgeon.

Class II.—Those methods by which we learn as to the functional activity of each kidney. (*a*) *Injection of methylene blue* (*chromo-cystoscopy*), or, as Voelcker and Joseph recommend, indigo-carmine, as used by Heidenhain in his studies of kidney function. They say that indigo-carmine has many advantages over the other coal tar pigment, methylene blue, which has hitherto been used in kidney work. It is non-toxic, is excreted only by the kidney, does not suffer any change in passing through the body, and its appearance in the urine begins within a short time of its administration, reaches a maximum in 30 minutes, and comes to an end in 10 hours. They inject 4 c.c. of a warm sterile 4 per cent. solution in normal saline into the gluteal muscles. On introducing the cystoscope, the urine is seen to leave the ureteral orifices in jets of blue-coloured fluid, and by noting the size, frequency, and force of the two streams, one can estimate the amount of work done by each kidney; this also greatly facilitates the finding of the ureteral openings; but this method involves waiting for an in-



GEORGES LUY'S URINARY SEGREGATOR.

definite time with the eye to the cystoscope, as often one ureter will work freely before the other commences. Or, having got the most of the urine required by the segregator, the injection of the indigo-carmine is made, and the segregator left in, and a note made of on which side the colourisation first takes place, and compare, by the colour, the quantity being excreted by each kidney, and so judge of the activity of the organs.

(*b*) *The Phloridzin Test* (Chromo-Segregation).—Phloridzin or phlorizin is a bitter glucoside, obtained from the bark of apple and pear trees, which, in doses of from 15 to 30 grains, causes a renal diabetes; the urine is then either drawn off from each kidney separately by the ureter-catheter or by segregation, and the amount of sugar in each sample estimated. The most diseased kidney excretes the least sugar. Casper states that "this test allows of an exact diagnosis of the location of a kidney affection; it affords information in regard to the composition and functionating capacity of the other kidney not to be obtained in any other way, and makes it possible to avoid the preventable 'kidney deaths,' and thus materially to diminish the mortality of kidney operations." Israel has been denying the reliability of the phloridzin test. By this means we can say that one kidney is in a better condition than the other, but as we do not know how much sugar should be excreted by a healthy organ, we cannot judge as to whether both kidneys are affected, only that one is more affected than the other, so that this test does not tell us all we want to know.

(*c*) *Cryoscopy*, or *the determination of the freezing points of blood and urine*. Vant Hoffs and Raoult pointed out that fluids freeze at a lower temperature, the greater the quantity of impurities they contain. According to Koranyi, the freezing point of normal blood is 0.56° C. (From this it does not vary more than 1-100th of a degree up or down. Urine is not so steadfast, varying from 1° to 2° C. in proportion to the solids which it contains.)—The physiological limits being 0.56° C. and 0.57° C., a lowering of the freezing point to 0.58°, 0.60°, or under, shows that both kidneys are acting badly. With a normal freezing point one kidney at least must be acting well. The freezing point is lowered in renal disease, because the retention of products of metabolism increases the molecular concentration of the blood. With the apparatus of Heidenhain and Beckmann (with a special thermometer graduated in 1-100ths of a degree), 20 c.c. of blood is required (nearly an ounce of blood), impossible to get without a venesection, which is not desirable. With the simple apparatus of Dresar, 5 c.c. is required, or nearly 1½ drachms, which would also be difficult to get, besides which the blood test gives us the same information that the phloridzin test gives, for it only says that one kidney is functionating fairly well. A degree of "hepatism" and blood impurities may influence the freezing point. Examination of the freezing point of urine, especially of segregated urine, gives more accurate knowledge as to the functionating power of each kidney, but there is difficulty in getting the amount of urine by segregation. The freezing point of normal urine varies as the amounts of solids vary in normal urine, between 0.9° C. and 2.0° C.; a freezing point above 0.9° C. denotes fewer solids in the urine than there should be, and so denotes renal insufficiency, but that test is also liable to error from various causes, for Zangemeister says "that the value of direct observations of the lowering of the freezing point of urine in determining the efficiency of the kidney is open to several sources of error."

"The recently-discovered fact that in parenchymatous nephritis the kidney may be unable to excrete an excess of water introduced into the body may cause urine to be passed, the molecular concentration of which is greater than that of normal urine. The variations in the dissociation index of different specimens of the urine is another source of error, for on diluting urine, the molecular concentration calculated, proves the freezing point does not sink proportionately. Urates may also be precipitated from the urine, in cooling, so as to cause the freezing point to rise." He advises the dilution of the urine to what he calls the "ideal" freezing point. On the other hand, Ferrannini thinks that the results will be more harmonious if a standard freezing mixture be adopted, such as ether, as in Raoult's apparatus, or a mixture of 20 per cent. sodium carbonate with ice, which ensures a temperature of −2.015° C.; the fluid to be examined, he says, "should never be diluted, and the attempt should not be made with a quantity of less than 8 c.c." (over ʒii.) "It is important to have the air in the test tubes dried beforehand to prevent variations from different degrees of evaporation. It is indispensable to have the fluid stirred whilst it is congealing, and this vertically, and the non-admittance of air must be ensured." So that the process takes time and attention. There is difficulty in obtaining the amount of fluid required, the apparatus is complicated, that is, proportionately so, and there is liability to error, although the test is a good one and, until lately, has been the best, highly spoken of by Richter, Casper, Tinker, and various others; but we have a simpler and better means of testing, requiring simpler apparatus, not so much fluid, less liability to error, and discovered by a late member of our own University, Professor A. E. Wright, now of St. Mary's Hospital, London.

(*d*) *A. E. Wright's and Kilner's* "*Hæmolytic Index*," which we hope will prove to be simpler and less liable to error than the freezing point of blood or even urine. They say that "the examination of the urine for albumin is a very indirect, ineffectual, and often fallacious method of obtaining information with regard to the excretory efficiency of the kidney, while it is capable of revealing leakage of the albuminous substances from the blood into the urine, it tells us nothing with regard to the excretion of the salts and products of metabolism generally into the urine." It is based on the following principle:—A standard quantity of normal red corpuscles suspended in a measured volume of salt solution of a standard strength furnishes a test fluid. The urine, or, as the case may be, the "blood fluid" (serum) is mixed in progressive dilutions in a capillary tube with measured volumes of the standard suspension of red blood corpuscles. The point is determined at which the urine or serum has been so far diluted as to allow of complete hæmolysis of the standard suspension of red corpuscles. From these data, taken in association with the data obtained on diluting the suspension of corpuscles with progressive dilutions of a deci-normal sodium chloride solution, the concentration of the serum or urine is calculated; the quotient obtained by dividing the latter by the former is denoted "the excretory quotient."

This does not seem as simple as I hope it really is, but that matter I leave in the hands of the pathologists, and hope to hear soon from Dr. Stacy, who is working at the subject, that he is ready to make the examinations.

To summarise.—In most cases, after studying the physical signs and symptoms, and having an X-ray photograph taken, it will only be necessary to segregate the urine with Luys' segregator and then have an ordinary chemical and microscopic examination of the urine made. But in a doubtful case, where it is essential before operating that one should know whether the least affected kidney or other kidney has sufficient functional activity to carry on life, if it should be advisable to remove the one operated upon; then segregate the urine and have it tested by the "freezing point" or "Wright's test," and corroborate this evidence by the indigo-carmine test.

By the use of these combined tests and the simple form of segregation, the cystoscope is not required at all in renal diseases (unless there is some special indication for its use), time is saved, there is less danger of infecting a healthy bladder, the patient is saved some pain, and a deal of inconvenience, so that the cystoscope can be relegated to its proper sphere of usefulness — examination of diseased conditions of the bladder itself.

(**Read before the New South Wales Branch of the British Medical Association.**)

THREE CASES OF SUPRAPUBIC ENUCLEATION OF PROSTATE GLAND (FREYER'S OPERATION)

By B. Poulton, M.D., M.R.C.S., Lecturer on Surgery University of Adelaide.

I HAVE recently had the opportunity of examining three old men operated upon about a year ago, and a brief record of their cases follows:—

1. Mr. B., aged 70 years, was sent by Dr. Finniss, of Glenelg, on May 18th, 1903. He had been suffering from urinary frequency for some years, and was found to be thin, feeble, and nervous—obviously broken in health and spirits. He refused to have a catheter or sound introduced. Rectal examination discovered an enlarged prostate. On May 21st Dr. Finniss gave ether. The prostate projected like a horse collar, and after making a short incision on the right side, the right lobe was enucleated, and came away separately; next, the smaller middle lobe, and lastly the left lobe. The growths peeled out fairly easily, their removal being facilitated by Dr. Cavenagh-Mainwaring, who raised and steadied the bladder-floor from the rectum. There was very little hæmorrhage. Before attacking the prostate, 11 ovoid calculi, about the size of Barcelona nuts, were removed. The

prostate weighed four ounces one drachm. The temperature rose on the first and second evenings to 100.8° and 100.6°. There was much mental anxiety during the second week, with slight nocturnal delirium. On the fourteenth day a rigor occurred, with temperature 102°, and a slight epididymitis declared itself. On the nineteenth day a lot of phostatic concretions were removed from the sinus. Voluntary micturition began on the twentieth day, and five days after urine ceased to flow from the wound. On June 29th he went home, feeling well and strong, stating that " it is a positive pleasure to micturate." Seen May 13th, 1904. Has gained six pounds in weight since October; is feeling strong and well; says he has no urinary difficulties and can retain his water for 11 hours if necessary. He appears to have lost his nervousness, and looks robust and well nourished.

2. E.R., *æt.* 70, sent to the Adelaide Hospital by Dr. E. W. Morris, of Port Adelaide, on June 10th, 1903. There was a history of long lasting urinary trouble, with frequent nocturnal micturition. For the last three weeks all urine has been evacuated by catheter. After four days' rest in hospital and vesical irrigation, the prostate was removed, under ether. The growths were enucleated without difficulty. There was little bleeding. Weight of growths, one ounce. The drainage tube was removed at the end of a week; but urine was not passed per urethram until the end of the third week. The wound closed five days after, and he made a good recovery, and was discharged in the seventh week. An attack of facial erysipelas gave some anxiety, but did not materially interfere with the patient's progress. Seen in May, 1904, he is found to be in very good health, and suffering no urinary trouble, though he gets up sometimes to micturate at night.

3. J.S., *æt.* 58, seaman, was sent to the Adelaide Hospital by Dr. E. W. Morris, of Port Adelaide. He has had difficult and frequent micturition four years, and says that during the last year he has been obliged to pass water every hour day and night, getting on to his hands and knees and evacuating with pain and difficulty. The man was weak and thin, his mental faculties considerably impaired. The prostate was very large. After a week's rest in hospital, suprapubic enucleation was done under ether anæsthesia, after first removing three calculi about the size of loquat stones. The lobes were shelled out with difficulty, being apparently firmly adherent to the sheath. There was little bleeding. In this case, as in No. 2, the floor of the bladder was raised and steadied by the insertion of two fingers into the rectum. He bore the operation well. The growths weighed 1½ oz. Epididymitis occurred in the first week, and the urine was very purulent for several days; urine was not passed naturally until the thirty-third day; thence there was rapid improvement and a good recovery. Seen on June 18th, 1904, his mental condition is satisfactory. He can do light work, and says, " I am as well as ever; it is a new life altogether."

CYSTIC DILATATION OF LOWER END OF URETER.

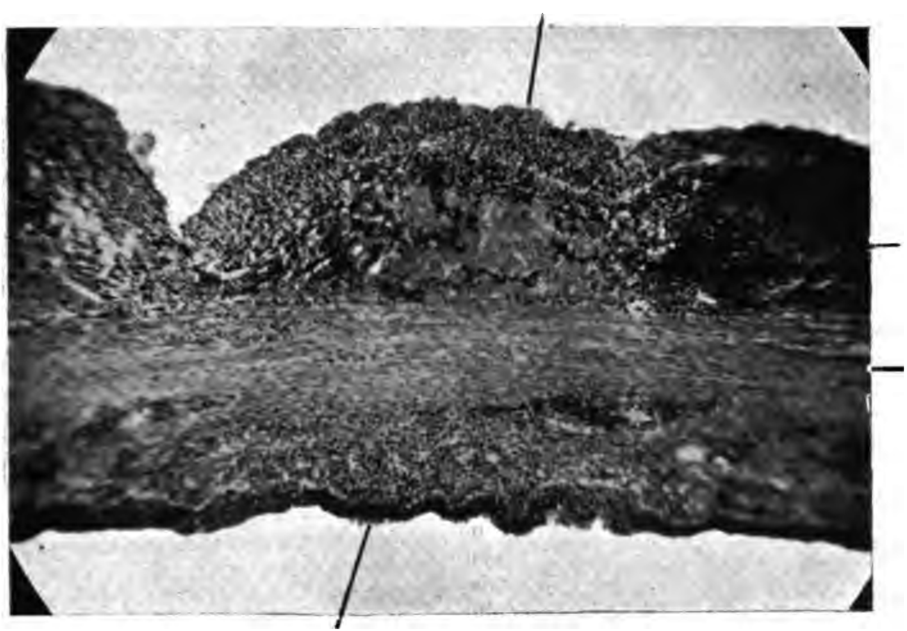
By Francis H. Furnival, M.R.C.S. (Eng.), L.S.A. (Lond.), Hon. Surgeon St. Joseph's Hospital, Auburn, N.S.W.

M.D., female, aged 16, recently consulted me for a certain amount of incontinence of urine, some slight discomfort in micturition, and the presence of a small lump at the orifice of the vagina. Her family history is excellent. Her previous history was only of a slight attack of scarlet fever, years ago, and no history of injury which can be connected with her present illness.

The present illness began almost suddenly four years ago, although preceded for a short time by a dull pain in the left side. The first symptom noticed was the almost sudden discharge of blood from, as the mother thought, the vagina; this was believed to be the commencement of the catamenia. This discharge only lasted a day, but the prominent symptoms were almost at once established, and continued up to the time of the operation. They were incontinence of urine, and a frequent desire to micturate, in the day time only, accompanied by the appearance of a small tumour, which slowly but steadily increased in size during observation.

When I first saw her the lump was the size of a large pigeon's egg, covered with a smooth red mucous membrane, lying just inside the left labia, protruding somewhat forwards from the orifice of the urethra. She was given an anæsthetic in her own home, under the impression that it was a simple cyst; but, finding that this was not the case, she was removed to the Auburn Hospital on April 20th. Drs. Bowman, Harrison, and Kerr assisting, I proceeded to remove the tumour, when I found that it easily slipped backwards and forwards through the urethra, which was well dilated, but would not, even with further attempts at dilatation, admit a finger to explore the bladder; but, working round it with a sound, it was evident that it was attached to the left base of the bladder by a long pedicle of the width of my little finger. The protruding portion was seized with a pair of clutch forceps, and as much of the pedicle as possible drawn out of the bladder. An incision was made into it to see what the contents were, and an ounce or so of opalescent, odourless fluid escaped; the lining membrane was a mucous membrane; a probe was easily passed along the interior of the sac for some seven or eight inches, in the direction of the left loin; no stone or obstruction of any kind being felt. The cyst was now forcibly dragged down, and a pair of small, curved pedicle forceps clamped on it close up to the urethra; a fine catgut suture was top-sewn loosely over the forceps with one end secured; the forceps were then stopped off, and the suture tightened up and secured. A catheter was kept in the bladder for 24 hours, but on account of discomfort, etc., was then removed. The bladder was douched twice a day for a week. For the first few days a few blood-clots were washed out. She had full control of the bladder almost immediately after the catheter was removed, and never complained of any pain. The progress of the case was quite uneventful. There was no rise of temperature or pulse, although there was a good deal of vomiting for the first 36 hours, attributed to the chloroform.

The specimen of the cyst and its contents were handed to Dr. Stacy, with the opinion that it was a ureter.


Ureteric Epithelium.
Longitudinal Muscular Coat.
Circular Muscular Coat.
Vesical Epithelium (outer covering)
× 100

TRANSVERSE SECTION OF CYSTIC DILATATION OF URETER.

Pathological Report by Dr. Stacy.

The specimen sent to me by Dr. Furnival was a finger-like tube, about 1½ or 1¾ inches in length, and with a lumen that would admit a stout lead pencil; conical in shape at the distal end; here it had been opened during the operation; its proximal part was cylindrical; here it had been severed by the knife from the part remaining in the bladder. The wall was about 1-10th of an inch in thickness.

Microscopical sections showed the wall to be lined both inside and out with transitional epithelium, that on the former being many layers deeper than that on the latter; there were two layers of muscle—an outer circular and an inner longitudinal; outside the circular band was some areolar tissue. The nature of the epithelium and the arrangement of the muscular fibres is the same as obtains in both the ureter and bladder.

Having read Dr. Furnival's notes, I am confident that the case is what Hurry Fenwick, in his book on "Ureteric Meatoscopy," describes as "ballooning of the ureteric orifice," in which there is a narrowing (generally congenital) of the ureteric orifice, which may be so minute that the pressure of the urine on the lower section of the tube swells out its termination into a bulb, or cyst; the wall of this is lined on the outside by bladder epithelium, on the inside ureteric epithelium, and between these the two layers of bladder muscle.

In two cases recorded the affection was bilateral; in the others it was unilateral. Fenwick has seen four cases, and quotes others. Out of 15 cases in which the ending of the ureters is exactly specified, there were nine in which the ureter was double on the side of the cystic termination. The kidney, from which a double ureter springs, is often divided into two parts transversely, an upper third from which the abnormally ending ureter emanates, this section of the kidney being atrophic from back pressure and diseased; a lower two-thirds from which the normal ureter arises to end at the normal position in the trigone.

Only a few of the cases recorded were so advanced as this one in which the cyst protruded from the urethra during the day, while the patient was up and about; this would not allow the "sphincter vesicae" to act, and hence the incontinence . Being unaware at the time of the probable nature of the cyst, I did not examine closely for a pin-point opening in the distal extremity; possibly the slit made by the operator's knife went through it.

Fenwick distinguishes "ballooning of the orifice" from "prolapse of the ureter." Prolapse he calls a condition in which the ureteric orifice is large; the mucous membrane of the ureter slips through, and turns inside out; cutting through this would cause sub-peritoneal hæmorrhage and probably death.

(Read before the New South Wales Branch of the British Medical Association.)

CONGENITAL HYPERTROPHIC STENOSIS OF THE PYLORUS.

By W. Anstey Giles, M.B. and C.M. (Edin.), Hon. Surgeon to the Adelaide Hospital; Lecturer on Clinical Surgery in the University of Adelaide.

Cases of this kind were looked upon as being exceedingly rare, but the impression is gaining ground that the affection is far more common than was supposed. It is possible I may have failed to recognise the condition during the 20 years I have been in active practice, but I certainly never came across one with such typical symptoms as the case which I propose to report this evening.

In September, 1902, Dr. Lendon read a most interesting paper on this subject, and recorded a case upon which he operated, but, unfortunately, without success. He has very kindly suggested that I should exhibit tonight the very instructive specimen which he has preserved.

No very satisfactory explanation of the cause of this condition has been offered, and it appears to me the subject requires further elucidation. Dr. Nicoll summarises the different views at present held as follows :—

1. That the condition is the result of a primary congenital developmental aberration, possibly connected with the junction at the pylorus of "two different processes of development."
2. That the condition is the result of a congenital hypertrophy of the muscular walls of the pylorus, secondary to antagonistic and incoördinated action of the muscles of the stomach on the one hand and the pylorus on the other; this incoördination being dependent on functional disorders of the gastric nervous system, ultimately resulting in "congenital gastric spasm."
3. That the condition is the result of spasmodic contraction arising from gastric irritation after birth, and therefore not congenital.
4. That the condition is the result of chronic inflammatory processes.

In the *B.M.J.* of the 25th June, 1904, a contribution to the etiology and treatment of this affection appears by Drs. McCaw and Campbell, of Belfast. They publish notes of an unsuccessful case. The operation undertaken was pyloroplasty, and the child died on the sixth day. They allude to the case published by Dr. Cautley in the *Lancet* of March 5th, 1904, which ended fatally from "marasmus, induced by starvation from insufficient food passing through the pylorus." The obstruction was due "to hypertrophy, with secondary contraction of the hypertrophied muscle." They add: "this view may be correct, and with it we have no fault to find; but examination of the stomach immediately after death in our case has convinced us that there is another and most important factor at work which is of paramount importance in making the incomplete pyloric obstruction absolutely complete, and this factor is the condition of the gastric mucous membrane. With a condition of more or less stenosis of the pylorus, the efforts of the stomach to overcome the obstruction led to hypertrophy of the muscular and mucous coats, and the longer such obstruction remains unrelieved the greater this hypertrophy becomes. In our case life was prolonged sufficiently for quite an astonishing degree of hypertrophy to develop, the stomach walls having become very thick and the mucous membrane abundant and corrugated. On testing the patency of the pylorus by filling the stomach with water, not a drop passed through in spite of pressure made to force it along, although the pylorus admitted an ordinary cedar pencil, and on examination this very effectual obstruction was seen to be caused by two folds of the much hypertrophied mucous membrane falling down over the pyloric orifice in a way that vividly recalled the action of the mitral valve. We are therefore persuaded that this hypertrophied condition of the mucous membrane becomes a most important factor in these cases, insomuch as we believe it effectually blocks the already contracted pylorus."

The average age at which symptoms develop is about five or six weeks. The child suffers from constant vomiting without apparent cause, and especially without symptoms of gastritis or enteritis. The vomited matter does not usually contain bile. Constipation is pronounced, but symptoms of obstruction are wanting. In the first stage the child is ravenously hungry, takes its nourishment greedily, and vomits frequently. In the second stage there are marked peristaltic waves from left to right; vomiting is still conspicuous and emaciation rapid. The pronounced marasmus allows us to see the outlines of the dilated stomach, and if this motor power is not lost, to observe the peristaltic waves. The occurrence in an infant of frequent vomiting at first in small quantities, later at longer intervals and of larger amounts, in the absence of any definite cause, is the first and most suggestive symptom. Constipation and emaciation, the exaggerated peristalsis, the hard, contracted pylorus, and, lastly, the dilated stomach are the symptoms and signs upon which the diagnosis of congenital hypertrophic stenosis of the pylorus is based.

The first successful case was recorded by W. Abel, in the *Munchen. Med. Wochen*, of November, 1899. The patient was a male infant, eight weeks old, and anterior gastro-enterostomy was performed. In 1900, J. H. Nicoll, surgeon to the Children's Hospital, Glasgow, recorded in the *B.M.J.* the second successful case. He performed Loreto's operation, and the child, 12 months afterwards, was in good health.

In their work, Robson and Moynihan state that pyloroplasty, on account of the great thickening of the pylorus and its rigidity in the whole circumference, is inapplicable. Pylorectomy is unnecessarily severe. Gastro-enterostomy is quicker and probably much safer. Murphy's button should on no account be used to effect the anastomosis.

On March 12th, of this year, I attended Mrs. M. at the birth of her third child. The labour was natural in every respect; the infant, a male, did not present any abnormality, and was above the average in weight and measurements. The mother made a rapid and uneventful recovery.

When my attendance ceased the infant was taking nourishment well, was not an unusually fretful child, and appeared to be thriving to the satisfaction of all concerned. On April 23rd I received a message to call and see the baby, when the mother supplied me with the following history:—On the 20th the baby was very restless, crying a good deal and did not sleep at all. He was easier during the night. The next day the same evidences of distress were manifested, while at night the symptoms seemed to abate, and he obtained some hours of natural sleep. He was restless and fretful during the following morning until about noon, when he suddenly vomited freely and seemed easier in consequence. The attack came on about an hour after being fed, and the milk that was returned seemed but little altered in appearance. All that afternoon he continued to vomit at frequent intervals, but that night he rested fairly well, and appeared to suffer very little discomfort. Next morning, about an hour after taking the breast, he became violently sick. It was not the ordinary trivial regurgitation commonly observed in young infants, but the contents of the stomach were ejected with surprising suddenness and force, gushing forth like water from a pump. The child was given the breast about every two hours, and took it greedily.

On examination I discovered nothing indicative of grave disturbance. He did not look ill, was fairly well nourished, and had certainly made good progress during the interval of three weeks since my last attendance. The bowels were constipated, so glycerine enemata were ordered, and I suggested that nourishment should be administered in much smaller quantities. The next day I found the condition unchanged. The child had lengthy fits of crying, and appeared to be in pain, but was relieved after an attack of vomiting. Sometimes one meal was retained for two hours or more, but after a period of restlessness vomiting would surely follow, varying in degree and intensity. On the 25th the vomiting, though not so frequent, was unaltered in character. The child was always uneasy, slept very little, and the fits of crying were frequent and prolonged. An action of the bowels was unaccompanied by any evidence of relief. The clear, concise statement volunteered to me by the mother at my first visit, and the subsequent events observed by myself, suggested to my mind the possibility of a contracted pyloric orifice.

The mother's milk was drawn off by the breast pump and administered in teaspoonful doses frequently, but nevertheless vomiting of a spasmodic and violent character occurred. Barley water and white wine whey, given in very small quantities, were tried with no better result. Swiss condensed milk and other foods were tried, but the vomiting continued as before.

On the 27th, Dr. Poulton kindly saw the child with me in consultation, and we discussed the probable diagnosis. During the following days the same symptoms presented, varying slightly in intensity, and the child emaciated rapidly. Every conceivable alteration was made in the quantity and quality of food administered, without any advantage whatever.

On the 30th, Dr. Poulton again saw him. There had been no signs of gastritis or enteritis, for throughout the temperature had remained normal, the motions were perfectly healthy in appearance, and the tongue clean. No lump could be felt on palpating the abdomen.

On May 2nd it was very evident that the child could not survive much longer if let alone. There was then marked evidence of a dilated stomach, as the abdominal wall was so wasted the peristaltic movements from left to right were distinctly visible. I told the parents that in my opinion the only chance of saving his life was surgical interference, and to this they consented. In the afternoon Dr. Swift met me in consultation and agreed with the diagnosis and treatment proposed, which was a posterior gastrojejunostomy to relieve the urgent symptoms.

On May 3rd Dr. Swift administered chloroform, and with Dr. Poulton's assistance I opened the abdomen in the middle line above the umbilicus. We found the stomach enormously dilated, and the pylorus surrounded by a cylindrical hard mass, about one inch in length and almost of the consistence of cartilage. We were struck by the markedly collapsed state of the intestines. It was obvious that a posterior gastrojejunostomy was indicated, and this I performed by Von Hacker's method, employing two layers of silk sutures. The operation was completed in half an hour, and the child stood it remarkably well. Doubtless this was largely due to the care and skill which characterised the administration of the anæsthetic. Nothing could be more encouraging than the manner in which the child rallied during the day, sleeping at intervals, and apparently not much distressed.

He was allowed to take the breast one hour after the operation was completed and at intervals during the day. That night, however, a sudden collapse occurred, and I was sent for in a hurry. The child was pale and pulseless, did not respond to any stimulation, the respirations were shallow and very rapid, and I feared that I had been too dilatory about adopting surgical measures. I removed the dressings and discovered that considerable hæmorrhage had occurred from a small vessel in the abdominal wall, which was soon arrested after a stitch at the lower angle was removed. The wound was then resutured and another dressing applied. The next day marked improvement was observed, He took the breast milk readily and retained it, though occasionally some sickness occurred. From this onward he made steady progress and put on weight rapidly. His appetite was excellent, and a plentiful supply of natural nourishment was available. He would sleep six or seven hours at a stretch, vomiting of any serious consequence ceased, and he appeared to be perfectly happy and comfortable.

It is now nearly three months since the operation, and now he is a well nourished, healthy baby, with all his functions carried on in a normal manner. He has on occasions some vomiting of bilious matter, but this will surely disappear as time goes on.

In view of the fact that so few cases have been published of a successful posterior gastro-jejunostomy by suture in an infant seven weeks old (this being the first in Australia, so far as I can ascertain), it is particularly gratifying to be able to bring this one before you. I may state, without fear of contradiction, that the child was undoubtedly saved from death by starvation by timely surgical interference.

(Read before the South Australian Branch of the British Medical Association.)

A CRITICISM OF THE "ARRIS AND GALE LECTURE," 1904, ON A SO-CALLED PANCREATIC REACTION IN THE URINE.

By Chas. E. Ham, M.B. (Lond.), and J. Burton Cleland, M.D. (Syd.).

(From the Pathological Institute, London Hospital).

Dr. P. J. Cammidge, in delivering the above lecture this year before the Royal College of Surgeons of England, described a reaction he had obtained in the urine in various cases, pancreatic and otherwise, which he considered would be of value, if taken in conjunction with the physical signs, in diagnosing disease of the pancreas. The method, as originally detailed in his lecture, consisted in hydrolysing urine with hydrochloric acid, "neutralising" the latter with lead carbonate, and treating the filtrate with phenyl-hydrazine hydrochlorate and sodium acetate. In pancreatic cases and in a few others, "where active tissue change was taking a place," "more or less abundant flocculent deposit of yellowish crystals in rosettes and sheaves" occurred, easily recognisable by a ⅙ in. objective. In the *Lancet* for March 19th, 1894, and the *British Medical Journal* for April 2nd, full accounts of the lecture, of the technique of the reaction, and of the results will be found.

On reading these accounts, however, an unsatisfactory feeling of ambiguity is left behind, and the notion remains that the scientific basis and handling of the test is far too empirical to warrant acceptance without careful scrutiny. Such being the effect left on our minds by the perusal of Dr. Cammidge's paper, we set to work with the object of investigating the value of the reaction for ourselves, experimenting with urines from healthy people, from those suffering from pancreatic disease, and from those otherwise affected. One of the first fallacies detected in the test we found depended on the employment of lead carbonate as a neutralising agent. Lead salts (the chloride, carbonate, acetate, etc.), we found, on boiling with phenyl-hydrazine hydrochlorate, and sodium acetate, formed a compound, apparently with the power of these two, which appeared as crystals corresponding with the description Dr. Cammidge gives of the "pancreatic crystals." Moreover, photographic delineations of Dr. Cammidge's crystals exactly resembled these, and we believe that it was these lead-compound crystals that Dr. Cammidge confounded with those of a specific reaction. Their appearance or non-appearance in any particular urine after treatment depended further on the concentration, etc., of the urine, this latter depending, of course, on vigorous or moderate boiling. Hence the varying results Dr. Cammidge obtained, and it is probable that the difficulty always experienced in diagnosing pancreatic affections, and the small number of controls employed, enabled him to ground, though on such irregular data, the idea of a specific reaction.

On pointing out this possible fallacy to him, Dr. Cammidge then stated that he also obtained crystals, though with much more trouble, when using barium carbonate as the neutralising agent and sulphuric acid as the hydrolyser, these crystals being likewise more or less diagnostic of pancreatic disease. But here, again, he has fallen into error, and it would seem that these crystals have no more relation to disease of the pancreas than to that of the brain or vermiform appendix. By hydrolysis of urines and subsequent treatment with phenyl-hydrazine, etc., crystals may be obtained, though the process requires often much care and the employment of a considerable bulk of urine, which crystals resemble somewhat those of a maltosazone. They are, however, as far as our experience goes, smaller than these latter, more bluntly pointed, often obscured somewhat by yellowish amorphous grit, and forming usually more or less regular rosettes rather than typical sheaves. In these points they likewise differ from the lead compound crystals which so closely resemble those of the osazones. The occurrence of such crystals has been known for some while, and are referred to by Dr. Pavy in the *Journal of Physiology* for 1898. Dr. Cammidge has again mistaken crystals obtainable from many urines for those of a specific reaction.

Since Dr. Cammidge has neglected to refer in his original paper and in subsequent correspondence to these two types of crystals, which both would answer to the loose description he gives of the "pancreatic crystals," we must infer that he was ignorant of their occurrence, and that he has shown no reason for considering that the "pancreatic crystals" he has obtained may not be rightly placed in one or other category.

But supposing Dr. Cammidge still thinks that his crystals are *sui generis* and distinct from the two types referred to above, what criticism will they bear? He has thought fit, in subsequent correspondence, to withdraw his original theory that the crystals were those of "glycerosazone," dependent on the excretion in the urine of glycerine, the result of the splitting up of fats in fat necrosis, and so being indicative of pancreatic disease. Yet this, he informed us in his lecture, was the starting point for his investigations, the boiling with a strong mineral acid being undertaken to convert glycerine into glycerose. Now he propounds the view that the crystals are those of an isomaltose, and this view has certainly more to recommend it than his former one, the parallel case of pancreatic glycosuria supporting it in some measure, though it is probably as absurd to expect the presence of an isomaltose in the urine in nearly all, or in all but a small percentage of cases with disease of the pancreas, as to expect glycosuria itself.

Continuing the perusal of the description of the test, we come to an extraordinary statement about certain characteristics of the crystals, by means of which the matter of the antecedent pancreatic disease can be diagnosed. We are told that if such disease be acute pancreatitis, the crystals, on observation under the microscope, will be found to dissolve in a half to one minute in strong sulphuric acid; if it be chronic pancreatitis, the time will be longer, and if malignant disease, the process will take three to five minutes. Yet the crystals are surely the same chemical compound in each case!

As empirical as the above is a further method given for diagnosing the nature of the pancreatic disease. This consists in the supposed fact that a solution of mercuric chloride will inhibit the formation of the crystals during the progress of the test if their original source be from acute inflammation of the gland, and that it will not do so if their origin be, say, malignant disease! Yet, here again the crystals must be the same compound in each case, and we feel confident that whatever influence the mercuric solution might have, it would affect the antecedents of both crystals in the same way.

These two instances of scientific empiricism are equivalent to suppoisng, for instance, that the crystals of glucosazone obtained from glycosuric urines might have different chemical properties according as the disease was of hepatic, cerebral, or pancreatic origin, though the crystals were identical in nature in each instance.

The fact that many people place value on this pancreatic test, which we firmly believe to be valueless, and the danger to the community of their so doing without being warned of the various fallacies that seem to surround it, have been the reasons for our desiring to bring forward this adverse criticism of it, and if at any future date a useful test is evolved, we shall rejoice exceedingly thereat; but we very much doubt whether the urine will be the medium through which this will be accomplished.

RECORDS FROM GENERAL PRACTICE.—NOTES ON MIDWIFERY CASES.

By J. A. Cameron, M.B., B.C. (Cantab), Ipswich, Queensland.

It seems almost necessary to say a few words by way of explanation as to why I bring such a subject before you to-night. Our indefatigable secretary does not approve of mere listeners at our meetings, and having once beguiled one into reading a paper, never rests content till he gets promise of a second one; and, naturally, one turns for a subject to work one is most at home in; also, it is an advantage by way of change for us sometimes to have brought up at our meeting a paper upon some subject of everyday interest, of which we have all had some experience, and which we can all discuss, as a contrast to the papers of higher interest only discussed by a few. This was my object when last I read a paper here, and I was rewarded by everyone present speaking. To-night, with the same object, I bring forward some notes upon midwifery cases, which was the title I intended for my remarks, not being quite such a pretentious one as that which appeared on our notice cards.

I remember being very much struck, shortly before starting in private practice, with a paper—Dr. Cullingworth's presidential address to the London Obstetrical Society, in 1897, in which he dealt severely with practitioners, contrasting the puerperal death rate in public institutions from sepsis with that of the cases outside, and showing how the death-rate in London alone kept excessively high, while in lying-in hospitals it had been practically abolished. The subject has been frequently brought forward by others. In Queensland, puerperal fever is put down among the list of notifiable diseases; 42 cases have been notified since January 1st, 1902, but, obviously, this by no means can represent the correct numbers, for in 1903 alone, out of 12,621 births there were 32 deaths under the titles puerperal fever and puerperal septicæmia, 14 of these occurring within the Brisbane ten-mile radius. It is also pretty certain that at least two-thirds of the births throughout the State are not attended by any medical man, judging at least from my own district, so that puerperal infection in many of these would not be recorded.

It seemed to me very strange, and I puzzled greatly in those days as to why there should be this difference between hospitals and private practice. I came the other day upon the following explanation by the late Dr. Milne-Murray. He says: "I feel sure that an explanation of much of the increase of maternal mortality from 1847 onwards will be found in—first, the misuse of anæsthesia, and, second, in the ridiculous parody which in many practitioners' hands stands for the use of antiseptics. In a word, the use which has been made by many of two of the greatest blessings of humanity has converted them into little else than a curse." He then goes on to point out that anæsthesia has caused more operative interference, and the dangers arising therefrom have not been checked by efficient surgical cleanliness on the part of the attendant, a perfunctory use of an antiseptic lotion being often considered sufficient.

I would, therefore, ask you to discuss to-night the use of anæsthesia in labour, its effects (good and bad), and briefly the steps for the prevention of sepsis. I want to show that we can use anæsthetics without hesitation, and also that by working on ordinary surgical lines we can afford not to be afraid of sepsis.

The two general anæsthetics used in midwifery are, of course, ether and chloroform. The latter seems so eminently suitable, safe and convenient that practically since Simpson's time it has kept ether out of the field. Many men, however, are now recommending ether, especially if forceps are to be used or version and similar operations to be performed. Hewitt, in the last edition of his book, recommends chloroform, but says that there is risk of inertia and post-partum hæmorrhage if deeply given, and says that ether should be given for instrumentation, version, etc. I have no experience of ether at all in midwifery work, although I was taught to use it always, and am using it fairly frequently in general work, and, therefore, am in no wise prejudiced against it. I used chloroform at first in midwifery as more convenient, and now for other reasons of suitability, safety, absence of disagreeable after-effects on mother and child, and so on. I have notes of exactly 400 cases of chloroform administration in full term labours up to the beginning of last month, of which 31 were given by me to patients confined by other doctors, 23 were given in my own cases by other men, and the balance, 346, given by me in my own cases. They vary from a few drops given with the last few pains to one extending over three hours continuously, and from the lightest to deep surgical anæsthesia. In only two out of the number was any note made of there being the slightest cause of any anxiety, and in these two it was only of very short duration. When we remember also that it has frequently to be given to weary, exhausted patients, sometimes in poor health before labour starts, sometimes to perform difficult extractions or other operations frequently attended with loss of blood, there can be no doubt that chloroform carefully given, as, of course, any anæsthetic should always be, acts very safely. On the other hand, Hewitt states that he has collected eight deaths during labour under chloroform, but no details are given. Playfair recommends A.C.E. mixture as the safest for obstetric work, and thinks there is less tendency to bleeding with it.

The 400 cases are divided into 156 cases of light anæsthesia, where the chloroform is given to diminish and not to abolish pain, and 244 cases of deeper anæsthesia, of which 178 are for forceps extractions, and the other 66 for performing version, in eclampsia, replacing prolapsed funis, dilating a rigid os, removing the placenta, suturing the perineum, and so on. For the first set of cases, where an anæsthetic is used just to diminish pain, chloroform is eminently suitable. I believe it is usually best to give enough to send the patient asleep, then to stop the administration until the patient, by moving about or moaning, or some such way, shows that she is coming to again; then a little is given as a pain comes on and stopped as it goes off; and so given, chloroform is practically free from risk, if we bear in mind that the depth of anæsthesia at which sensation of pain is lost without uterine contractions being abolished varies greatly in different persons. This partial anæsthesia is interesting, because usually most of the danger of chloroform arise from incomplete and irregular anæsthesia. This certainly does not hold in midwifery, and partial anæsthesia can be maintained for hours with safety. The degree of insensibility produced, and the consequent behaviour of the patient varies greatly, and is interesting to watch. Some seem awake and conscious and able to answer questions nearly all the time, and yet afterwards state that they felt very little; others toss about and complain when the pains come, and yet afterwards express gratitude for the abolition of pain; others, with just a very little chloroform, rapidly become insensible, and so on. Galabin states that ether used to this partial extent does not deaden pain in the same satisfactory way. Norris and Dickinson say that ether acts equally well, and that there is little difference in safety between the two so given. Some, however, are of opinion that the uterine contractions do not become checked to the same extent with ether in this partial anæsthesia. I hope to try for myself how ether acts when thus given, but have felt so satisfied with chloroform that hitherto I have never felt very inclined to change.

When given to the degree of surgical anæsthesia, *e.g.*, to introduce the hand into the uterus, for high forceps operation, etc., ether has more advocates. My lack of experience does not permit me to dogmatise upon its value, but I can say that in 244 cases of this kind I do not recollect once regretting that I did not use ether instead. Here, again, care is necessary as to the amount given. It is sometimes astonishing how little chloroform is required to induce deep anæsthesia in a patient exhausted by a long or hard labour. In a forceps case, after the instruments are applied as required, lighter anæsthesia may usually be permitted, to allow uterine contractions to be fully re-established to assist the traction efforts. The ordinary rules observed in inducing deep anæsthesia of course apply equally in operative midwifery as in general surgery. It has struck me repeatedly that patients so seldom vomit or feel sick on coming to. I don't remember seeing attention drawn to this point, and was therefore very interested the other day when a copy of Sir J. Y. Simpson's original papers on "Chloroform in Midwifery" came into my hands, to find him stating that he had often been struck by the circumstance that its use is very rarely followed by sickness and vomiting. It is also unusual to have a stage of struggling or excitement as the patients go under, although there is often talking. I am sure that vomiting is much rarer than when chloroform is ordinarily used. I have generally employed a drop bottle and Skinner's mask, also Junker's inhaler. The latter apparatus is very suited to the purpose of light anæsthesia with the pains, especially if one is single-handed. At what stage of labour as a rule should we use the anæsthetic? Apart from some cases of rigid os, it is not to be used in the first stage. It is customary now to decry the use of vaginal examinations during labour, so that one feels almost afraid to admit having done so, but I have given it 17 times to dilate the os digitally in protracted first stages. Simpson states that he has used it sometimes when the os uteri was comparatively little dilated if the pains were severe. It helps to soften and relax a rigid os and forward dilatation. In the second stage it may be given pretty nearly as soon as the patient asks for it, any slowing effect being counterbalanced, if desirable, by careful use of forceps. During the third stage it may be required to remove placenta, suture the perineum, etc. Incidentally, I may say that Simpson's original papers, with graphic descriptions of the first parturient patients he anæsthetised, make most interesting reading.

The chief objections to using chloroform are:—First, that it delays labour. This it undoubtedly almost always does. In my opinion it lengthens the intervals between the pains, and often diminishes the intensity of pains. The chief class of patients in which it does not do so are some hysterical or highly strung people, who seem quite unable to control themselves, and toss and throw themselves about, crying out with the pains. A little chloroform in such a labour frequently completely alters its character; the patient assists the uterine contractions, and the pains become longer and stronger and more effective. When in ordinary labour the pains are slowed, a careful use of forceps counterbalances this. Fothergill, in his excellent manual, says: "It (*i.e.*, chloroform) slows labour somewhat, but, as a rule, time thus lost may be regained by the judicious use of the forceps. In the hands of a skilful practitioner the patient will fare much better with both chloroform and forceps than without either, as pain, time and fatigue are saved." This exactly expresses what I believe to be good practice; and on going through my own cases I find that 312 of the vertex presentation cases had chloroform administered, and of these 312 chloroform cases 171 were assisted by the use of forceps. The next objection to chloroform is that it predisposes to post-partum hæmorrhage. Here we are on difficult ground, because what one would consider post-partum hæmorrhage, another would not. For example, at the Intercolonial Medical Congress, held in Brisbane in 1899, during a certain discussion more than one man said that he had never had a case of post-partum hæmorrhage; and in an analysis of 10,000 cases attended in the outdoor maternity department of the Leeds Infirmary (*B.M.J.*, 9-1-04) there were 76 cases of post-partum hæmorrhage, and the reporter adds, by way of comment, "opinions vary so much as to what shall be called post-partum hæmorrhage, and too many inexperienced observers have been responsible for the diagnosis." We must remember, too, that one woman may lose an amount of blood with impunity which would cause serious symptoms in another. What, however, makes it almost impossible to settle this question one way or the other is that it is difficult to prove that bleeding occurring after chloroform administration is caused by the chloroform and would not have occurred if it had not been used. After duly weighing these considerations, I am of opinion from my own cases that deep chloroform anæsthesia does help to set up more free bleeding than would otherwise occur. I must confess that I have not been lucky or skilful enough to say that I have never had a case of post-partum hæmorrhage. I fancy that short of severe hæmorrhage, there is as a rule a more copious bleeding during and after the third stage of labour when much chloroform is used than when it is not used. It would not serve any useful purpose to quote figures in a series of a few hundred cases in this connection; but I was very much struck by a paper Dr. Brockway kindly lent me of a most minute and elaborate analysis of 100 cases of labour by J. K. Barton, M.R.C.P. (Lond.). He practised entirely among a well-to-do class of people, who expected to have little pain throughout, and who consequently had chloroform early in labour as a rule. He gave chloroform in 88 cases, using forceps 24 times, and divides the hæmorrhage as follows:—Very considerable, 3; considerable, 34; moderate, 38; slight, 19; very slight, 6. That is to say, 37 cases of considerable and 38 of moderate hæmorrhage out of 100 cases—somewhat different results to those who never get post-partum hæmorrhage, and, I venture to think, a bigger proportion than would have occurred had all the labours proceeded naturally.

Hewitt, as I have already mentioned, thinks there is risk of inertia and post-partum hæmorrhage if chloroform is deeply given. Galabin, while preferring chloroform to ether, thinks that in predisposed patients it increases risk of hæmorrhage, and in the third stage it involves risk of relaxation of uterus with post-partum hæmorrhage, and that it is advisable not to use it then except for adherent placenta. Norris and Dickinson and Lusk consider that it is abundantly proved that chloroform during labour tends to relaxation in the third stage; and Playfair also thinks that chloroform to extent of anæsthesia increases the tendency to hæmorrhage, and that there is less risk when A.C.E mixture is used. This constitutes the greatest objection that has been urged against the frequent use of chloroform, and indicates the necessity for, if possible, even greater watchfulness and patience in managing the third stage. The third objection to chloroform is the possibility of asphyxiation of the child.

My attention was first drawn to this when giving chloroform in a case of Cæsarean section operated on by W. R. Dakin in St. George's Hospital, London. There was some difficulty in getting the child to breathe, and he suggested that it was overcome by the chloroform. I have been on the lookout since, but have not been able to convince myself that chloroform given during labour does affect the child. It is a point not often commented on. There seems no obvious reason why it should not be so. Sir James Simpson, in his original paper, states: "The pulsations of the fœtal heart are little, if at all, increased in rapidity when the mother is anæsthetised." Bellamy Gardner, writing as an anæsthetist, says that there is no evidence to show that chloroform hurts the fœtus. Jellett states that it does not tend to asphyxiate children unless unduly prolonged (more than four hours, Dührssen). I have not come across other references to this point, but it is an interesting one. On the other hand, chloroform may indirectly benefit the child by allowing operations to be more speedily carried out and labour shortened.

The great and obvious advantage of anæsthesia is, of course, relief of pain and suffering, and so the conserving of the patient's strength, whether the labour be natural or assisted. As Simpson clearly puts it: "Its utility is not confined to the mere suspension and abrogation of conscious pain, great as, by itself, such a boon would doubtlessly be; but in modifying and obliterating the state of conscious pain, the nervous shock, otherwise liable to be produced by such pain, particularly whenever it is extreme, and intensely waited for and endured, is saved to the constitution, and thus an escape gained from many evil consequences that are too apt to follow in its train."

This alone is such a gain as to overweigh the slighter or doubtful disadvantages. It is claimed also that it is of help in dilating a very rigid os. Certainly it is if mechanical or digital dilatation is employed also; and it is also claimed that it helps to save the perineum from lacerations, and tends to shorten labour by relaxation of the soft parts at the outlet. This may or may not be so.

I do not go into the use of chloral, coal-tar analgesics, etc. I have twice tried a solution of cocaine on a rigid os. It has been highly recommended as of great assistance in tedious first-stage cases, together with chloroform, but I did not find any benefit from it in these two cases, and it involves considerable interference with the vaginal passage.

Now let us turn to the results as regards sepsis. As a standard, I take the results given by Jellett in his book. He shows a table of over 18,000 deliveries at the Rotunda from 1888 to to 1898 inclusive, with 21 deaths from sepsis, several of these being highly septic and some practically moribund when admitted, and a morbidity rate of 1 in 13.84. He includes under the term morbidity any cases in which the temperature has even once gone above 100.8°. This is an arbitrary division, and does not seem quite satisfactory, for the temperature fairly frequently rises as high as or higher than this for one day quite independently of septic infection of any kind. Norris and Dickinson, for example, give temperature charts showing exposure to cold, reflex irritation, emotion and acute constipation as causes of this among others. Two of my cases developed measles while in bed; another, acute lobar pneumonia, with empyema following, which I believed to be contracted from another case of pneumonia in the same house; and another case had acute pneumonia, which caused labour to start about the third day, the patient being a little over seven months pregnant. These are obviously not ordinary septic cases. On the other hand, sometimes a patient has a badly smelling discharge, evidently a form of sepsis, yet with a normal temperature throughout. These would not be included, yet they should be in reality. I have looked up any other published series of cases that I have come across lately, but in none is the morbidity rate given. In the Journal of the American Medical Association for October, 1903, is an account of 1000 cases attended by the students of Virginia Hospital, Richmond, among the very poorest class of people, with only four cases of sepsis. There is, however, no record as to morbidity, and as each case was visited on an average only four times, this point was not worked out from Jellett's standard. In Dr. Barton's series of 100 cases previously referred to, seven had a temperature of over 100°, none of them, he says, being seriously ill. Using Jellett's definition for the purpose of comparison, I find that in 785 midwifery cases, including abortions, 54 had a rise of temperature of 100.8° or over on some occasions during the convalescence—that is, a morbidity rate of 14.53. There were no deaths from sepsis. There were two badly septic cases that might have died—one in which I was called in to remove an imprisoned and, as it proved, adherent placenta, some hours after labour, and when the woman had bled profusely; the second, one in which the fœtus had died at the end of the fifth month and had been retained four months in uteri. There were seven others who had rise of temperature for three, four, or more days, and gave rise to anxiety, although not really seriously ill, and the rest had only a temporary rise of temperature. I also find that the morbidity rate is slightly more favourable in those who have had chloroform and manipulations than in those who have not. It may be objected that these are not exceptionally good results, nor do I claim them or bring them forward as such; but when it is remembered that many are conducted under unfavourable surroundings and circumstances, two out of 785 seriously ill from sepsis is a fair proportion; and I doubt whether in the same number of what I may call ordinary clean surgical cases in similar circumstances better results would be obtained, or a much smaller proportion with a temporary elevation of temperature occur.

If figures are of any value, I conclude from the above results that one can get in private practice as a rule results practically as good as in a modern lying-in hospital; and although it is an old story, I think it will be of some profit for us to consider how to attain the best results. In fairness to the practitioner in private as contrasted with hospital work, it must be remembered that he frequently works under much less favourable surroundings and circumstances. He is generally single-handed, his nurses are often inferior and not under control. I remember in one case where the baby was born before the regular nurse or I arrived. A neighbour woman had been called in and with pride attributed the rapid birth to her own skill. I found that she had with unwashen hand been vigorously rubbing oil into the perineum and inside the vagina as far up as she could. Again, the houses are often dirty, ill-ventilated and crowded, the bed and surroundings not above suspicion, and in spite of all one can do it is next to impossible to prevent midwives making vaginal examinations; and if the modern teaching as to the danger of this practice by medical men themselves holds good, how much more does it apply in the case of midwives. In country and bush work, I am convinced, this is a great source of infection, and even the trained nurse sometimes does not disinfect her hands thoroughly if left to her own devices.

How, then, are we to guard against infection of our patients? One remark in Cullingworth's address already mentioned struck me very forcibly. He says: "It is well to bear in mind that the triumphs of our lying-in hospitals have all been won by the scrupulous use of *antiseptics*, and that sterilisation, which is the essential element in aseptic surgery, is impossible in midwifery practice." He also says: "I firmly believe that if the simple antiseptic precautions with which every one is familiar were conscientiously adopted, puerperal fever would be as rare in private practice as it is now in the best lying-in hospitals." This practically is the root of the whole matter. Obviously we should apply the ordinary principles obtaining in general surgery. The points to be aimed at are (1) careful cleansing of our hands and instruments; (2) cleansing of the external genitals and surrounding parts of the patient; (3) prevention of infection by the nurse and surroundings of patient; (4) patience and care in managing the third stage of labour; (5) attention to the after-treatment, immediate and remote.

By far the chief, but by no means the only precaution is thorough and continuous disinfection of our hands and instruments. By continuous, I mean repeated cleansing of the hands, and in any operative proceedings, manual or instrumental, strict attention to all details of surgical cleanliness. My own practice is thorough use of the nailbrush and soap for about ten minutes for the hands, using generally the mercury biniodide soap; then I soak them in strong lotion of mercury biniodide for a sufficient time. The biniodide is efficient and easily carried in soloid form. Instruments are boiled and then put straight into biniodide lotion. Great care is taken that neither hands nor instruments touch against anything before introduction. No lubricant of any kind is ever used. The next step is the application of the same process to the external genitals, thighs, and perineum of the patient. Now this is by no means easy. Patients often object, and even if they do not, it is almost impossible to disinfect the parts as one can one's hands. Lockwood, in his lectures on Aseptic Surgery in this year's *B.M.J.*, places the external genitals as the most difficult part of the whole body to disinfect, next to the scalp. Galabin is of opinion that the vulva cannot be disinfected without being shaved; and Horrocks, in an interesting address on Puerperal Sepsis (*B.M.J.*, 13-11-04), says that it is practically impossible to do it. One of the advantages of an anæsthetic, to my mind, is that the patient can be more thoroughly cleansed and kept so than is often otherwise possible. I consider this the most difficult part of the case to conduct properly. I must admit that unless I have a patient under chloroform I often do not carry out this step as I should like; and I expect this is where others, if they will be candid, will confess to failing also. If a patient is tossing about, and getting into all sorts of attitudes, how can she be kept surgically clean, even if made so to start with? To be logical also, all the bedclothes and bedlinen should be sterilised, obviously generally an impossibility. In making a vaginal examination, if care is taken, the clothes having been turned right back and the parts well exposed to view, to separate the labia with the fingers of the non-examining hand, the risk of conveying infection from the external genitals is practically nil; and if any operative measure is contemplated, thorough washing with soap and water, and then with antiseptic lotion, can usually be carried out after anæsthesia is induced.

Next, a watchful eye must be kept upon the midwife. The objectionable habit of nurses making vaginal examinations should be discountenanced. Some nurses pride themselves upon not sending for the doctor too soon, and to enable them to do this, frequent vaginal examinations are made. The temptation is great to acquiesce with this custom, but it should be checked. To diverge a little, I feel tempted to ask whether something could not be done by us as an association to tackle the midwives question, and try to provide some simple teaching and better help for women who, unable or unwilling to obtain a doctor, are dependent upon a midwife of the usual type. The numbers who do so are surprising. For instance, in my own town, in 1902 there were 409 births, of which 146 were not attended by a doctor; in 1901 there were 434; of these, 193 had no doctor; and for the same year in town and district there were 1084 births, and of these, 741 had no doctor present. It is no unusual thing to be summoned on a long journey to a woman where the placenta has been left 24 hours or more undelivered. To return, the fourth point, and one of great importance in preventing infection, is the proper management of the third stage. This was excellently dealt with in a paper read by Dr. Weild about two years ago, so that I do not intend to go into it now, beyond saying that attempts at unduly hurrying the third stage often result in bleeding or portions of placenta being broken off, weakening the patient or forming a centre of infection. Patients weakened by bleeding are more liable to infection. Finally comes the repair of a torn perineum, if necessary, and then the cleansing and dressing of the patient, and the carrying out the after-treatment as may be required for each case. Lysol makes a good antiseptic for the nurses to use for washing the patient. In the *Australasian Medical Gazette* for March 20th, 1903, is a paper by Dr. C. H. Souter, of South Australia, in which he puts very clearly and tersely his method of conducting a case of labour for prevention of sepsis. His directions are simple, and should represent everyone's practice with unessential modifications. The only point he mentions that I think unnecessary, if not harmful, is the use of a douche for the vagina after the use of forceps, or for the uterus if the hand has been passed into it.

In conclusion, the results of my series of 785 cases have made me feel that whereas one should not needlessly interfere when things are going smoothly, yet one need not refrain from doing so if there is delay because of the bugbear of sepsis. I have learnt to think that with these precautions we can carry out any operative proceedings we think advisable without infecting our patient. No surgeon hesitates to put his hand into an abdomen because he is afraid he cannot disinfect it properly, nor should an obstetrician hesitate to carry out manipulations because he cannot be sure he will not infect his patient. If he does so with the same care as he would in doing a section, he need have no fear of his patient suffering from his proceedings. On the other hand, it must be freely admitted that neglect of precautions on the lines laid down will undoubtedly lead to bad results. In reading over my notes I can see that with more care better results might have been obtained in several cases. The whole point lies, as Cullingworth says, in the conscientious adoption of antiseptic precautions. It is not always easy to be conscientious in midwifery practice. Personally, I never hesitate to examine, to dilate the os digitally, to rupture the membranes, put on forceps, or otherwise interfere if I think I can thereby save time and the patient's strength, and a little chloroform usually enables all these things to be better done. Abdominal palpation, of course, is very useful for diagnosis and estimating the stage and rate of progress of labour, and it would be absurd to refuse to use it or any other means of gaining information that would be of service in conducting a case ; but conditions in private practice are such that most men frequently are obliged to disregard it to a large extent after being in practice a while. Obviously, the correct thing is to combine the two methods. I always palpate the abdomen carefully first if there is time, and then make a vaginal examination, not solely—indeed, not chiefly—for diagnosis, but to see if I cannot help the patient by shortening the labour. Hours of weary suffering can often be saved by simple manipulations. Text-books and teachers have exaggerated the dangers of sepsis from them. There is a risk, undoubtedly, but one that can be easily guarded against. It is not right to teach that abdominal palpation is so greatly superior a method and should be used to the exclusion of the other. In this matter, as Professor Stephenson, of Aberdeen, says, "the general practitioner knows better." Both are useful in different ways, and if I have laid more stress on the latter, it has been chiefly to emphasise my initial points as to the safety and advantage of both anæsthesia and early operative assistance, as seems good to the skill and experience of the individual.

(Read before the Queensland Branch of the British Medical Association.)

CHOREA IN THE COURSE OF ACUTE RHEUMATISM.

By C. Reissmann, M.D. (Cantab.), M.R.C.P. (Lond.), Adelaide.

A LITTLE girl aged nine had pains in her legs some 15 months ago, severe enough to make her keep in bed three days. After that she quite recovered. She now again has fallen ill with fever (temperature 103°, respiration 40, pulse 140), and acute pains in her legs, knees, and ankles. The joints, however, are not red or swollen. Her illness was preceded by a sore throat. When I saw her on the third day after she had fallen ill, she also had active endocarditis. The apex beat was in the fifth space, half an inch outside the nipple line. At the apex there was a loud, systolic murmur, conducted out into the axilla ; but the second sound was clear. Elsewhere cardiac sounds were normal. During the few following days the character of the systolic murmur changed; from being soft and blowing it became high pitched and whistling, and the second sound at the apex became less loud. A mid-diastolic murmur also appeared. The other cardiac sounds remained normal. There was evidently active mitral disease. Under the influence of salicylate of sodium, the pains rapidly subsided, and the temperature fell to normal. The endocardial murmurs, however, persisted. Fourteen days after the onset of the pain, the patient developed well-marked chorea in the legs, arm, face, and tongue. The movements were of the usual type, ceasing during sleep and increasing under excitement. They interfered considerably with her speech, and also prevented her from walking. This was her first attack, but seven years ago, when she was but two years of age, her brother, then aged 10, suffered from chorea, following a fright ; he soon recovered.

Most physicians regard chorea as a manifestation of rheumatism, and pathological research teaches the same lesson. As is well known, Poynton and Paine in 1902 isolated the diplococcus rheumaticus in 11 successive cases of acute rheumatism. When inoculated into rabbits this organism reproduced the clinical character of rheumatic fever, viz., polyarthritis, valvulitis, pericarditis, and sometimes also chorea. Lastly, the same organism was recovered in pure culture from the joint exudate, heart blood, urine, and cerebro-spinal fluid of the inoculated animals. These observations have been confirmed more than once.

During the present year Beattie[1] has obtained the diplococcus rheumaticus from the knee-joints of two fatal cases of acute rheumatism. He was able to cultivate the organism and to reproduce the symptoms of acute rheumatism by inoculation in rabbits. One of these rabbits developed definite chorea, with twitching of the head and eyes to the right. When the animal attempted to walk, it fell to the right side, and the twitching became more marked. From the urine of this rabbit a pure culture of the diplococcus rheumaticus was obtained.

It has therefore been shown by Poynton and Paine, and confirmed by more than one observer, that the diplococcus rheumaticus can produce choreiform movements. This furnishes the explanation of the fact that so many cases of chorea (26 per cent.) have at some time previously suffered from definite rheumatism. In most cases, however, chorea is a late sequela appearing in from six months to six years, or later after the rheumatism. It is an uncommon event for chorea to make its first appearance during an attack of acute rheumatism, yet the association has long been known. In 1869, Dr. Greenhow, of the Middlesex Hospital, published such a case, and he remarks of it: "It is the most severe case of chorea that I have seen end in recovery." A similar case in which chorea complicated acute rheumatism with endocarditis was published a few years ago by Drs. Little and Scott.[3] The chorea was of so severe a type that the patient, a woman aged 21, died from exhaustion resulting from inability to swallow. Quite recently Dr. Gault, at a meeting of this Society, described a similar case. The chorea was severe, but the patient recovered. There are other cases on record, but the chorea is not always of a severe type.

It is obvious that a series of cases in which chorea complicates a definite attack of rheumatism helps to establish the hypothesis that chorea is often one of the manifestations of this disease; and at the present time, when our views of the pathology of rheumatism are being materially changed, it seems desirable that such cases be recorded.

REFERENCES.—(1) Journal of Pathology and Bacteriology, March, 1904. (2) Clinical Society's Transactions, 1869. (3) Transactions of Academy of Medicine, Ireland, Vol. XIV.

(Read before the South Australian Branch of the British Medical Association.)

A CASE OF EARLY MENOPAUSE.

By M. A. Schalit, B.Sc., M.D., Delegate, N.S.W.

MRS. E., *æt.* 33, a native of Delegate district.

Hereditary Antecedents.—Maternal grandmother (an Englishwoman) commenced to menstruate at 13. Regular, flow scanty, no pain. Married at 17, and had three chilrden, all in good health. Confinements difficult and attended by free hæmorrhage. Had several subsequent uterine hæmorrhages, but menses finally ceased at 35. Enjoyed good health till 74.

Parents alive and healthy.

Mother enjoys good health. Menstruated at 14; has been regular, without pain. Married at 18. Has had 12 children, all alive and healthy, and nursed them all. Menopause at 48; now 50.

Nothing abnormal in menstruation of sisters up to the present.

Personal History.—Was born in 1871. Is the second eldest child. Had no serious complaints during childhood. Menstruation commenced at 14; irregular as to periodicity and duration; no clots. Married at 17 to a healthy man of same age; pregnancy occurred five months later. Hæmorrhages, of two days' duration, occurred at first, second and third months of pregnancy and an occasional "show" up to term, when she was very weak. After a difficult labour, a healthy female child was born, followed by hæmorrhage and faintness. Suckled the child for six months, when lactation failed. Had several severe hæmorrhages at irregular times. One year after birth of child she again became *enciente*, but aborted at two months, with great loss of blood. During the succeeding 12 months she had several hæmorrhages, but no regular menstruation. At the end of that time she again became *enciente*, and, as with the first pregnancy, she lost blood each month for three months. Had another difficult confinement, with great hæmorrhage, giving birth to a weakly male infant. Was unconscious for several days and ill for a long time. Had no milk. After the birth of the child her menstruation ceased and has never reappeared.

Daughter.—*Æt.* 14, in good health and menstruating regularly. Boy not strong; is subject to colds.

Mrs. E. first consulted me November 9th, 1902, for some slight nervous affection.

Present State.—Mrs. E. is a healthy-looking woman, medium height, inclined to stoutness. Circulatory, respiratory, digestive and urinary symptoms in normal condition.

Gynæcological System.—Breasts in a state of fatty degeneration; uterus small, not displaced nor tender.

Nervous System.—Suffers from slight headaches and nervous feeling every month.

Discussion.—To what cause can we assign the extraordinary physiological phenomena? Amenorrhœa is often seen in young subjects, but mostly there is a plausible reason for its explanation. It may be due to (1) anæmia, with its subdivisions, (2) wasting diseases, (3) pregnancy, (4) retained menses, (5) ablation of the generative organs, (6) imperfect development of the sexual organs, and (7) heredity.

The first five reasons may be at once eliminated, and little can be said for the sixth, seeing the organs performed their functions for seven years. The seventh reason only remains. The maternal grandmother ceased to menstruate at 35 without any tangible reason, as she enjoyed the best of health. The normal state of the subject's mother, as well as of her daughter, looks like atavistic heredity ; but can we rely upon a single case ? Medical literature known to me does not mention hereditary influence as a cause of early menopause. I have not met with a similar observation. I dare say this will be the authentic case of menopause in a woman of about 21, without any supplementary secretion, like those cases reported by G. F. Jones (*American Journal of Obstetrics*, 1887, p. 92, v. xx) of a young woman who after a suppression of her menses from a cold did not regain them for five years, but had an abundant secretion of milk for 36 hours. Another woman having had several children, had during the first three days of her menstrual period a severe diarrhœa, with white uterine discharge which stopped with the appearance of a drop of blood. He mentions another case of periodic white uterine discharge instead of menstrual outflow. There was no supplementary secretion in this case, but even the milk supply dried up.

Let us analyse the physiology of the menstrual act for the reason of the phenomenon. In the female organism from puberty to the climacteric two existences are simultaneously produced : that of the individual and that of the species ; that of the organism in general and that of the genital apparatus in particular. The genital apparatus is not, so to say, an accessory wheel in the female organism ; on the contrary, it is the most important. The female body makes incessantly a saving towards the impending conception to which every female being is constantly exposed—provision for the formation and later for the nourishment of the child. If conception does not take place, this saving must find some other outlet ; that outlet, which ordinarily happens every 28 days, constitutes the menstrual act. Later, when the organism grows older and no more fit for procreation, the saving power diminishes and subsequently stops ; then the climacteric is reached.

In our case the irregularity shows that the "saving" was imperfectly carried out, the hæmorrhages during pregnancy pointing to the same thing. Later, when the needs of the growing fœtus is greater, the mother's capital (so to speak) is called upon and her organism is weakened at the end of the gravid period ; hence faintness and relaxation of the whole muscular system, slow labour, and hæmorrhages. When the system pulls itself together, she has abundant milk secretion, and even hæmorrhage, but later the "saving" diminishes ; consequently, less milk secretion and no hæmorrhage. The same irregular saving takes place with the second and third conceptions, consequently the hæmorrhages appeared, but not so severe as with the first child. Now the saving power commences to give way, the future child is badly nourished and of delicate constitution. After the confinement, which was more difficult than the first, the relaxation of the muscular system became more evident ; hence faintness, unconsciousness and hæmorrhage, which required artificial aid to stop it. But this time it was too much for the constitution, the saving power being abused through its own extravagance or by accident (hæmorr. post-partum)) ; add the hereditary predisposition, or rather the hereditary disorganised power of saving, and you will have better reasons to understand that, notwithstanding her 21 years only, our patient has practically reached her climacteric at that age. Her appearance is that of a woman past her climacteric. Her genital organs are those of a woman of 45, and she experiences no sexual feeling.

Conclusion.—The interest of this observation is purely physiological, from which standpoint it is most interesting, being a deviation from the natural course. Medical literature does not contain many similar cases, yet it cannot be singular. Her grandmother's case, although not so pronounced, is similar, the menopause occurring at 35, which is not usually the terminus of genital activity. It is to be regretted that the case was not closely studied 13 years ago. A close study of her daughter and progeny may prove, I venture to think, highly interesting and valuable from the physiological standpoint, especially with regard to the question of heredity and atavism.

Charitable Donations and Bequests.—Mr. and Mrs. R. Barr Smith, of Adelaide, have conjointly given £1000 to the Queen's Maternity Home for the extension of the building. The late Mr. John Connell, of Sydney and Melbourne, merchant, has left legacies of £100 each to the Melbourne Hospital, the Children's Hospital and the Infectious Diseases Hospital. Under the will of the late Mr. A. C. Garrick, formerly of Sydney, who died at Holcombe, Westcott, near Dorking, England, on March 24th last, the Hospital for Sick Children, Glebe, and the Royal Prince Alfred Hospital, Sydney, each receive legacies of £250. An inmate of the Melbourne Benevolent Asylum, named Buchanan, who died on July 2nd, was admitted on October 22nd, 1903, and on October 27th he made a will in favour of the asylum. After death it was found that deceased had £1000 lying at interest in the Bank of Australasia at Williamstown.

REVIEWS AND NOTICES OF BOOKS.

Muco-Membranous Colitis. By Dr. Froussard, Ancien Interne des Hopitaux de Paris, Physician at Plombieres-les-Bains. London: Baillière, Tindall & Cox. 1903. Sydney: L. Bruck. Price, 1s.

In this small pamphlet, which deals with a subject of extreme difficulty from the point of view of successful therapeutics, Dr. Froussard, the physician at Plombieres-les-Bains, gives a brief account of the symptomatology and treatment of this condition. He lays stress upon the diet, prohibiting all coarse vegetable and fruit foods which give much solid residue, such as green vegetables, cabbage, cauliflower, strawberries and raspberries, etc. Other vegetables should only be given when well boiled and passed through a sieve. Plain roast or boiled meats and no made-up dishes should be allowed. In place of bread, rusks or toast are advocated; and for drink, pure water or with a little white wine should be taken. Milk, coffee, tea, and alcoholic drinks are not good. He treats the constipation with mild laxatives rather than with strong purgatives; and for relief of pain advises hot water bags or poultices, rather than the internal administration of opium or morphia. The general disturbance of the nervous system may be dealt with by hydrotherapy. In France, Plombieres and Chatel-guyon are the two places where it is treated with the greatest success. This pamphlet will be of service as a guide to treatment of these obstinate cases. G.E.R.

The Care of the Baby: A Manual for Mothers and Nurses, containing practical directions for the management of infancy and childhood in health and disease. By J. P. Crozer Griffith, M.D. Third edition, thoroughly revised. Philadelphia: W. B. Saunders & Co. Melbourne: Jas. Little. 1903. Price, 7s 6d.

This book certainly contains a large amount of useful information on the subject of which it treats. In the preface we are told that the author has endeavoured "to furnish a reliable guide for mothers anxious to inform themselves with regard to the best way of caring for their children in sickness and in health," and we think he has succeeded.

It is not a book for medical men to read, but it is a book that medical men may confidently recommend to those among their patients who need guidance in these matters and are anxious to learn. When we come to think of the appalling amount of ignorance that is displayed on all sides on the subject of the feeding and management of children, and the hopelessness of treatment in many cases because of this ignorance, we should welcome any sound book that deals with these matters in a commonsense way.

On the subject of baby clothes he says: "A child may develop pneumonia or diarrhœa just as easily from chilling of the arms and legs as from direct exposure of the chest or abdomen. Consequently, the custom of dressing with thin sleeves or with short dresses and bare legs cannot be too strongly condemned. It is a practice which in cool weather is both dangerous and cruel. It is a great mistake to try to 'harden' a child by letting draughts blow on it by covering it with insufficient clothing." The chapter on feeding the baby is one of the most useful, and will doubtless be read more than any other in the book, because, as Dr. Griffith says, "it is one of the most difficult of all questions of babyhood." In talking about the baby's nurse, under the heading of "The Nursemaid," he says: "Scarcely anything is more difficult than the obtaining of a thoroughly good child's nurse, scarcely anything more important to the child, and yet scarcely anything more carelessly done." Perhaps the book is a little too long, and we certainly think a large amount of chapter ii. on the sick baby might well have been omitted; but, take it as a whole, it is good. C.P.B.C.

Bibliographie der Gesammten Wissenschaftlichen Litteratur uber den Alkohol und den Alkoholisms. Berlin: Urban & Schwartzenberg. 1904.

This is a marvellously complete reference to everything of scientific importance which has appeared on the alcohol question, both from a scientific and from a social point of view. The question in different countries and languages has been dealt with by different hands, and the whole has been edited by Dr. E. Abderhelden, of Berlin. The thousands and thousands of papers referred to have been so arranged that the influences of alcohol on any patient or system can be at once looked up. The work is a bibliography pure and simple, and yet it runs to over 500 quarto pages. It is henceforth absolutely indispensable to any man who writes on the alcohol question. T.P.A.S.

A Text-Book of Operative Surgery. By Warren Stone Bickham, Ph.M., M.D. Philadelphia: W. B. Saunders & Co. Melbourne: James Little 1903. Price, 30s.

This book deals with general operative surgery, excluding those operations which are considered to belong to the special departments of surgery. At the same time the author includes a brief but clear account of hysterectomy, oöphorectomy, and prostatectomy, a feature which almost suggests his leaning towards a certain generalisation of specialism.

A brief account of the anatomy of the part is included in the account of each operation. This is a feature which will be of value to the student and to the practitioner whose knowledge of anatomy is apt to become somewhat shadowy in the face of an emergency operation. The type is good and clear, and the plates are numerous and well executed. The subject matter will be found well up to date, and on the whole it may be well recommended to students and practitioners as a good text-book on general surgery. H.C.H.

Contributions to Practical Medicine. By Sir James Sawyer, M.D., Senior Consulting Physician to the Queen's Hospital, Birmingham. Fourth edition, with many revisions and additions. Birmingham: Cornish Bros. 1904. Price, 3s.

In the present edition of this small collection of essays from the pen of Sir James Sawyer, some corrections and additions have been made which have been suggested to the author by his subsequent experience. Perhaps one of the most important subjects discussed in this volume is insomnia, and his remarks on the causes and cure of this complaint will repay careful reading. In his article on dieting in diabetes we note that the author's experience is in favour of the admission of potatoes to the diet list of the diabetic, and he has found that excellent baked cakes for diabetics can be made from a kind of flour prepared by rubbing down potatoes (cooked with their coats on by steaming), blended with cream and butter. We commend this small volume to our readers as one full of suggestive hints in the treatment of some common morbid conditions. G.E.R.

THE AUSTRALASIAN
MEDICAL GAZETTE.

SYDNEY, 20TH AUGUST, 1904.

RECENT ADVANCES IN RENAL SURGERY.

THE great advance which has been made in the surgery of the urinary tract in recent years has been brought prominently before our readers in several papers published in our columns in the last two or three years, some of which have been read and discussed at the meetings of the New South Wales Branch of the British Medical Association.

Dr. HINDER, in a paper on "Conservatism in Renal Surgery," pointed out the importance of conserving the kidney as much as possible by doing a nephrotomy rather than a nephrectomy in all cases in which there was the least probability of the diseased kidney resuming its functions, and life being saved. Dr. MAITLAND has recorded a case of severe renal hæmaturia in which, in his opinion, nothing short of nephrectomy had saved the patient's life, although to the naked eye the kidney did not appear to be much diseased; and in the opinion of most surgeons it would appear that the course adopted by Dr. MAITLAND of doing a nephrectomy rather than a nephrotomy, is the one most consistent with the safety of the patient's life in these obscure cases of so-called essential or idiopathic hæmaturia.

But while there may be some difference of opinion as to the exact treatment to be adopted in different cases, we must all agree that the important question in these renal operations is exactitude in diagnosis as to the site of the disease and the condition of the other kidney. It has occurred to more than one surgeon in past years to operate and remove the only kidney the patient has had, with an unenviable result to the patient. Such an untoward event, however, can hardly be possible nowadays if surgeons follow out carefully the lines of investigation of the renal functions as laid down in the paper we publish this month by Dr. STEER BOWKER. It is clear that the seat of renal pain is often deceptive as to the side upon which the lesion occurs, and no surgeon at the present day would operate on the side upon which the renal pain was complained of, without having a skiagraph taken of the kidney, without investigating the characters of the urine obtained by the segregator, or observing the urine as it passed from the ureters, when viewed with the cystoscope.

The great value of the newer instruments used in the investigations of the renal functions must be patent to all, and we find that alterations and improvements are continually being made which render them more easy of application and adaptation for the purposes indicated. While, however, we recognise the great advances which have been made in the technique of renal surgery, there still remains much difficulty in the correct estimation of the capability of the two kidneys in the performance of their excretory functions; and this difficulty is emphasised by the variety of the methods proposed to accomplish this end. It is well recognised that the mere presence of albumin in the urine coming from one kidney, and its absence from that obtained from the other, is no criterion of any defect in the excretory powers of the organ. It is only by a very careful investigation of the various constituents of the urine from each kidney, and comparing these with the food constituents, and the condition of the blood, that a true estimate of the functional activity of the kidney can be obtained. This is a difficult and complex piece of work in physiological chemistry, but none the less necessary, if the recent advances in renal surgery are to be conserved upon a sound basis.

THE PLEA OF INSANITY IN CRIMINAL TRIALS.

In two trials for murder at the recent sittings of the Central Criminal Court in Sydney the plea of insanity was raised in defence on the part of the prisoner, and in each case the prisoners were acquitted on the ground of insanity at the time of the committal of the crime.

In the first case a young man of quiet demeanour and respectable behaviour, but of a somewhat degenerate type, and with insane relations, was charged with the murder of a man, a member of a firm of estate agents with whom the prisoner had entered into some business arrangements. He believed that the deceased had acted unfairly towards him, and had been the means of his losing all his savings. This began to prey upon his mind, and he became sleepless and excited. He first sought redress by writing to several prominent persons, including the Inspector-General of Police, pointing out his grievance against his victim. It is remarkable that these letters were entirely unnoticed, although it must have been apparent from the tenor of them that the writer was in a dangerous mood, and the possibility of a tragedy being enacted very great. Unfortunately, as he was unable to get any redress, he took the matter into his own hands, and on meeting his victim in the street in broad daylight shot him dead. At the trial, Dr. CHISHOLM ROSS gave evidence for the defence, stating that in his opinion the prisoner was insane at the time of the committal of the deed, and that the murder was the result of an irresistible impulse, and he believed that at the time of the murder the prisoner did not know that the act he had committed was a wrong one. MR. JUSTICE SIMPSON in summing up to the jury directed them:—1. If the case was made out beyond reasonable doubt as murder within the definition he had given, the prisoner ought to be convicted of murder, unless he had made out to their satisfaction that he was suffering under a delusion, and believed it was necessary for him in self-defence to shoot his victim; in that case they ought to acquit him on the ground of insanity. 2. If the prisoner did not know what he was doing, they should acquit him on the ground of insanity. 3. If the prisoner was unconscious of what he was doing, and was unable to distinguish between right and wrong, and did not know he was doing a wrongful act, they ought to acquit him on the ground of insanity. The jury accordingly acquitted the prisoner on the ground of his being insane at the time of the committal of the crime. No other course was open to the jury under all the circumstances of the case.

The second was that of a Syrian who was charged with the murder of an old man, a hawker. A preliminary objection on the part of the counsel for the defence led to the issue being tried as to the sanity of the prisoner. The jury found that the prisoner was sane, and he was then placed on his trial for murder, and was subsequently acquitted on the ground of insanity at the time of the committal of the crime. In this case it seemed clear that the prisoner did not realise that he had done any wrong or illegal act in killing the deceased. He rather justified his action as a just one as a revenge for some slight injury alleged to have been inflicted upon him by his victim. It was proved in evidence that the prisoner was the subject of delusions, and he was considered insane by a medical man who saw him just after his arrest.

It is satisfactory to know that in these two trials there was no conflict between the medical and legal tests for insanity, and the ruling of Mr. Justice Simpson practically covered the ground advocated in the series of resolutions passed at the Third Session of the Intercolonial Medical Congress in 1892, which had been carefully drawn up by a sub-committee of the Public Health Section.

THE MONTH.

Australasian Medical Congress.

The next session of the Australasian Medical Congress is to be held at Adelaide from September 4th to September 9th, 1905. In order that all arrangements may be made in good time, it is desired that medical men intending to become members of Congress and to contribute papers to the different sections should send in their names at once to the State secretaries of Congress—New South Wales, A. A. Palmer, M.B., F.R.C.S. (Edin.), 149 Elizabeth-street, Sydney; Victoria, G. A. Syme, F.R.C.S. (Eng.), Collins-street, Melbourne; Queensland, W. W. Love, M.B., M.S. (Edin.), Brisbane; New Zealand, J. O. Closs, M.D., Ch.M. (Edin.), Invercargill, New Zealand; Tasmania, Gregory Sprott, M.D., C.M., D.P.H. (Glasg.), Hobart; West Australia, A. J. H. Saw, M.D. (Cantab.) Perth.

The Health of Pilots.

At the meeting of the Intercolonial Congress in Dunedin in 1896 the following resolution was brought up from the Sub-section of Diseases of the Eye, Ear and Throat, and adopted by Congress:—" That the Governments of the different colonies should take steps to ensure the proper testing of the vision of all men who are employed either at sea or in the railway services, whose duties are such that the lives of others depend on the acuteness of their sight either for form or colour." Five other resolutions detailing more specifically the standard required were also passed, and these resolutions were communicated to the different Governments, and legislation urged to provide for the periodical examination of men engaged in this class of service. As nothing was apparently done in this direction by the Governments, the matter was again brought up at the last meeting of Congress at Hobart, and the following resolution was passed:—" That the attention of the Colonial Governments be called again to the resolutions passed by the Intercolonial Medical Congress, held in Dunedin in 1896, on the subject of the standard of vision in sailors and railway men, and that the urgency of their adoption should again be emphasised, with the recommendation that a uniform standard for all the colonies be fixed, not lower than the highest standard at present demanded in any of the colonies for both form and colour." These resolutions show that the medical profession has been fully alive to the importance of the subject, and had these recommendations received the consideration at the hands of the Governments that they deserved, we should not have had occasion to deplore the loss of the fine mail steamer " Australia," attended as it was by very grave danger to the lives of a large number of persons. It is, however, some consolation to know that this serious object lesson is not to be lost, and that steps are now being taken to ensure the safety of the travelling public by insisting upon a periodical examination of pilots. The following regulation has been gazetted under the Navigation Act in New South Wales:—" No person appointed as first-class pilot shall be deemed eligible to continue to hold such position and discharge the duties thereof unless, in addition to compliance with other regulations relating to licensed pilots, at least once in each year he attends before a medical officer appointed by the Treasurer, and obtains a certificate under his hand that he is in good health and not affected with any bodily or mental complaint or infirmity rendering him unfit to perform the duties of a pilot, particularly as to sight (vision and colour), hearing and speech." We understand that similar action is also being taken in Victoria. This, however, is a most urgent matter for all the State Governments to take action, and we hope that the resolutions passed at these different Congresses will now receive serious consideration, and that the necessary legislative action will follow.

The Hospital Saturday Fund.

At the tenth annual meeting of the Hospital Saturday Fund, held in Sydney on July 25th, the annual report was read by Mr. C. M. Palmer. The total receipts for the year ended May 31 last amounted to £4878 8s 4d, being an increase of £267 11s 3d over the previous year, and £228 10s 5d more than the next highest record. The increases for this year as compared with last year had been :—Outdoor, £414 6s ; indoor-household, £14 17s 8d ; subscriptions and donations, £7 14s 3d ; interest, 19s 6d ; and the decreases, industrial, £158 10s 3d ; proceeds of entertainments. £11 5s 10d. The directors resolved to vote for distribution the sum of £4400, being the largest yet reached, and making the total distribution since the foundation of the association £39,800. The classification of the institutions and the amounts allotted were as follows :—1. General Hospitals.—(*a*) Metropolitan : Sydney Hospital, £925 ; Royal Prince Alfred Hospital, £710 ; St. Vincent's Hospital, £450 ; Royal Alexandra Hospital for Children, £350. (*b*) Suburban : Balmain Hospital, £145 ; Royal North Shore Hospital. £200 ; Parramatta Hospital, £150 ; Western Suburbs Hospital, £115 ; St. Joseph's Hospital, £95 ; St. George Hospital, £75 ; Manly Hospital, £70 ; Marrickville Hospital, £70 ; Sydney Homœopathic Hospital, £50. 2. Special Hospitals : Carrington Convalescent Hospital, £200 ; Queen Victoria Homes for Consumptives, £200 ; Lewisham Hospital for Women and Children, £200 ; St. Margaret's Maternity Hospital, £90 ; the Women's Hospital, £105. 3. Auxiliary Medical Charities, Civil Ambulance and Transport Brigade, £100 ; St. John Ambulance Association, £10 ; Surgical Appliance Aid Society, £25 ; Sydney Medical Mission, £40 ; District Nursing Association, £25. Total, £4400.

Preservatives in Foods.

The action of the New South Wales Health authorities in legislating against the use of preservatives in foods receives further support from the results of some experiments on the subject which have been in progress in America. The London correspondent of the *Melbourne Age* reports that about a year ago 12 young men volunteered to eat food containing borax and other adulterants or preservatives, under the direction of Professor Wiley, of the Agricultural Department at Washington, with the object similar to that aimed at in connection with the recent experiments of the American Food Tests Commission. In a preliminary report, Professor Wiley now states that the constant use of borax and boric acid, even in the smallest quantities, is undoubtedly deleterious, often causing headaches, loss of appetite, sometimes nausea, and loss of weight. "It is true," he adds, "that no effects may be noticed in persons of good health from occasional use of such chemicals, but the sickly and debilitated must not be forgotten, and the only safe rule is to exclude these preservatives from food for general consumption." We understand that the matter is also being at present investigated at the Sydney University by Professor Welsh and Dr. Chapman, who are making some special experiments in the bacteriology of milk, and the efficacy of these preservatives.

The Deportation of Lepers.

The maintenance of the leper lazarette at Little Bay is a source of considerable expense to the New South Wales Government, and, wherever possible, the Chinese lepers are assisted in returning to China. There are at present seven of these unfortunate persons in this institution, and the Board of Health are arranging for their deportation to China at a total cost of about £1000. Victoria has only one Chinese leper, and negotiations have been proceeding between the health authorities of the two States to enable this patient to return to China with his countrymen from New South Wales. It has been proposed that Victoria should contribute one eighth of the expense, viz., £125. The leper himself has been consulted, and has no objection to returning to China, but he asked the Victorian Government to give him £150 with which to start in business on his arrival in Hongkong. He points out that he was formerly engaged in a prosperous business in Melbourne, and through no fault of his own was taken to the quarantine station, abandoning his stock, debts, and other assets, worth £310. In similar cases where the patients have been sent back to China the Victorian Government has made grants ranging from £60 to £120. It costs about £70 a year to maintain a leper at Portsea, and his repatriation, even with a substantial gratuity, would mean a saving to the Treasury.

Pharmacists and the Medical Profession.

An important circular, which bears out the truth of recent statements in our columns, has been drawn up and signed by all the principal dispensing chemists in Sydney and suburbs, and forwarded to all members of the medical profession in the district. The circular is as follows :—

Gentlemen,—A matter of supreme moment, not only to us as practising pharmacists, but having an even more pressing importance to members of your profession, impels us to address you. We wish to call your attention particularly to the prescribing of *patent and proprietary medicines*, and especially to medicines packed in tablet form. There is a growing tendency nowadays to economise time ; the quickest, easiest way seems always to be selected. This, we think, is one reason physicians so frequently prescribe drugs in tablet form, and mixtures of proprietary origin. The ultimate effect of this is that self-medication among the general public has reached astounding proportions. It is now an everyday experience to be called upon by the public to supply not only such " simples " as bicarbonate of soda, cascara, etc., but such potent and dangerous drugs as chloralamide, erythrol, Easton's syrup, etc., in tablet form. Almost daily do we find instances of patients receiving a prescription ordering some readily decipherable tablet remedy, and, in place of presenting the prescription, merely asking for X.Y.Z.'s tablets of the drug ordered, and then disclosing the prescription in order to get the directions. From this it is an easy step to the almost invariable result of the patient recommending the remedy prescribed for himself to his friends without the intervention of the physician.

An actual occurrence will serve to illustrate the point : Recently Mr. Brown consulted Dr. ——— and from the treatment prescribed by the latter, derived much benefit. The prescription caused Mr. Brown no trouble to decipher. The prescription ran " *R/. Salol tablets* (*X.Y.Z.'s*) 20. *Take one three times daily.*" So, calling on his pharmacist, he simply asked for X.Y.Z.'s salol tablets, finding it unnecessary to make use of the prescription. Having himself benefited, Mr. Brown now consistently recommends—*not* Dr. ——— who prescribed the treatment, but—X.Y.Z.'s salol tablets ! *Cui bono ?* The physician benefits not at all, the pharmacist but little more, the consumer very possibly is injured by improper treatment—the manufacturer extends his premises and floods the physician with fresh literature and samples. Briefly, the position resolves itself into—a financial loss to the physician, and a danger to the public.—We are, etc.

We are sure that every member of the profession, on due consideration, will see the importance of this matter ; but as we understand some more drastic action is in contemplation by the pharmacists, we withhold further comment at present.

The Decreasing Birth Rate.

The birth rate in the New South Wales Metropolitan area, which has been decreasing from about 30 per 1000 in the year 1894 to between 25.5 and 26.5 in the last three years, shows at present no increase ; and, indeed, an increase is hardly to be expected yet, in view of the statements of the recent Birth Rate Commission. According to the report of the Government Statistician on the vital statistics for the month of July, 1092 children were born (533 males and 539 females). The birth record is five above the average for July during the previous five years. The birth rate corresponded to an annual rate of 25.68 per thousand. The excess of births over deaths was 621. The births relatively to population are much lower than the rate for July during the last 10 years. The illegitimate births numbered 114, and comprise slightly over 10 per cent. of the total births.

The Examination of Alleged Insane Persons.

We are glad to note that a much needed reform in the method of procedure in the examination of persons who are arrested in Sydney on suspicion of being of unsound mind has been accomplished. It is now notified in the *Government Gazette* that in future persons who are arrested in the metropolis on the supposition that they are of unsound mind will not be examined by a stipendiary magistrate at the Darlinghurst Police Station. As it is deemed expedient to discontinue the holding of such examinations in the police station, arrangements have been made to hold them in a place specially set apart at the Darlinghurst Gaol, and to be known in future as the Lunatic Reception House. It has been pointed out that some, at any rate, of these persons are really " borderland " cases, and the very fact of their being taken to a police station and treated practically as persons charged with some offence, is sufficient to produce an amount of mental excitement which determines an actual attack of insanity. We welcome, therefore, any reform in this procedure which will have the effect of preventing such occurrences in the future.

The Council of the Sydney Western Suburbs Medical Association has resolved that no member should subscribe to the Alphabetical Professional List proposed to be inserted (if paid for) in future issues of the Telephone Directory, and asks that other Medical Associations pass a similar resolution.

BRITISH MEDICAL ASSOCIATION NEWS.

PROCEEDINGS OF AUSTRALASIAN BRANCHES.

New South Wales.

THE regular monthly meeting of the Branch was held at the Royal Society's Rooms on Friday, July 29th, 1904, at 8.15 o'clock.

Present: Dr. J. L. Beeston (vice-president) in the chair, and about 35 members.

The minutes of the previous meeting were read and confirmed.

The CHAIRMAN announced the election of the following members:—Dr. St. John Dansey, R.P.A. Hospital; Dr. C. S. Bowker, Dungog; Dr. Newton, Tenterfield; and the nomination of Dr. F. G. Baur, of Medlow Bath.

The ACTING HON. SECRETARY (Dr. G. H. Abbott) explained the action taken by the Council in regard to the proceedings of a certain member of the Branch, and moved—"That the resolution of the Council passed on July 8th, expelling this member from the Association, be confirmed."

Dr. CRAGO seconded the motion.

After some discussion, in which Drs. McKay, Sinclair Gillies, Clarence Read, Steer Bowker, W. H. Read and G. Armstrong took part, the motion was carried, with one dissentient.

Dr. STEER BOWKER read a paper on "Aids to Diagnosis in Renal Surgery." (See p. 389.)

Dr. STACY wished only to refer to that part of Dr. Bowker's paper dealing with A. E. Wright's method (as outlined in the *Lancet* of April last) of determining the efficiency of the kidneys. Wright considers that the presence or absence of albumen in the urine is only a rough and ready test, his idea being to estimate the amount of salts and other products of metabolism in the urine and compare them with the amount existing in the blood of the patient. This is the principle in cryoscopy; to do which, however, we require delicate and expensive apparatus, also a comparatively large amount of blood (5 c.c. or more). He was informed by Dr. Chapman, Demonstrator of Physiology at the University, that cryoscopy entailed tremendous accuracy, otherwise the final result was much vitiated. As far as he could see, the same applied to Wright's method, as any preliminary error, however small, might afterwards become considerable, as it was multiplied by hundreds. Wright used the term "excretory quotient" to mean the degree of concentration of the urine divided by that of the serum; this in normal cases was generally two or over. In cases where there was an organic lesion of the kidney the figure was always below this. Wright claims that his method is of value to the clinician, operating surgeon, and insurance medical officer; but, as Dr. Chapman points out, one would have been better satisfied if he had examined a larger number of normal cases. The test, once one had got into the way of working with capillary tubes, would probably not take very long, say 20 or 30 minutes.

Dr. MAITLAND said he had listened with pleasure to Dr. Bowker's paper. Dr. Bowker rightly laid stress on the necessity for ascertaining the secreting power of the other kidney. It was not necessary in many cases, but if it were done oftener than it is it would be better. There is some doubt as to the best method of ascertaining the secreting power of the other kidney, and he agreed with Dr. Bowker that the best and most accurate results would be obtained by taking conjointly the evidences furnished by the various aids. One important point in the use of the segregator, which he had pointed out before this Branch when he read a paper on the segregator, is this, viz., it must be used with the cystoscope. The cystoscope eliminates the bladder, you see it is free from disease and débris, then collect your urines repeatedly from each kidney. He did not agree with Dr. Bowker's condemnation of the cystoscope. He thought it was sometimes very valuable in early and difficult renal cases, and he thought so: (1) because one could eliminate the bladder from the diagnosis; (2) one might be able to see pus or blood issuing from the orifice of either ureter; (3) abnormalities in shape and size of the orifices of the ureter may be noted. This he regarded as very valuable information, and he had at previous meetings of this Branch pointed out its value in making a diagnosis in a difficult case. He, however, did not go to the lengths that Fenwick did with regard to the information derived from this source. He quite agreed with what Dr. Bowker said about catheterisation of the ureters, and thought it should be avoided if possible. Dr. Bowker's paper was not on a series of a hundred or more operation cases, with so many done in hospital and so many in private, but on a far more important matter, viz., how to make our diagnoses of renal cases as perfect as possible. Personally he had much to thank him for.

Dr. MACKAY wished to ask Dr. Bowker whether he could suggest any means of ascertaining whether the ureter had been injured in the performance of hysterectomy or other abdominal operation?

Dr. R. STEER BOWKER said, with regard to Dr. McKay's question, if he did not diagnose that the ureter had been cut before, he would probably recognise it at the post-mortem examination. When Dr. Stacy said that Wright had only tried his test on eight cases, he fancied in reading the reports of the cases Dr. Stacy must have turned over two leaves at once. Dr. Maitland took exception to what he (Dr. Bowker) said about the cystoscope. Of course there are cases in which the cystoscope might be useful; but it was an instrument difficult to use—in a manner dangerous,—and in diagnosing *kidney* disease they had, he urged, simpler and more reliable methods, and not so irksome to the patient. In the case that he mentioned, no doubt it was of great service. In inflammation of the bladder, as Cathelin says, "if the bladder be thoroughly washed out and the segregation proceeded with at once, the cystitis will not interfere with the result of the segregation." The same argument may be used against the cystoscope, for in cystitis the fluid medium in the bladder would become turbid and prevent one seeing. He was not arguing for the *only* method, but for the *better* method.

Dr. E. C. HALL read a paper on "Eucalyptus Oil in the Treatment of Typhoid Fever."

Dr. CLARENCE READ asked Dr. Hall if he considered the eucalyptus oil acted as a disinfectant in the bowel? He considered turpentine a most useful drug in typhoid, but there was no royal road to be followed in the treatment of this disease, and it was very difficult to decide upon the actual value of any line of treatment unless observations were made in a very large number of cases. No one drug so far discovered had proved efficacious in all cases; but if Dr. Hall's results were borne out by subsequent observations there would be no doubt that they had in eucalyptus oil a most valuable adjunct in the treatment of this disease.

Dr. McKay asked if the temperature fell after each dose of the oil, and how long the reduction of temperature persisted after each administration of the drug?

Dr. Hall, in reply to Dr. McKay, stated that the temperature fell .5 of a degree after each dose of the oil and remained down for two or three hours subsequently. In reply to Dr. Clarence Read, he did not consider the oil more efficacious as an intestinal antiseptic than other drugs, such as carbolic acid, salol, etc. The beneficial action of this drug depended upon the amount of ozone it contained, and he considered its beneficial action to be due to its stimulating and diaphoretic properties.

COUNCIL MEETING.

A meeting of the Council was held at the Rooms on August 11th. Present: Drs. Rennie (in the chair), Crago, Jarvie Hood, Dick, Newmarch, Pockley, Worrall, Maitland.

The minutes of the previous meeting were read and confirmed.

The following gentleman was elected a member:—Dr. F. G. Baur, of Medlow Bath.

Communication received from secretaries of two lodges in Bungendore, N.S.W., stating that in their opinion there was a good opening for a medical practitioner in that township, there being no other qualified man within 20 miles.

Communications received from the hon. secretaries of the Queensland and Victorian Branches *re* the question of Branch subscriptions. Matter to remain in abeyance until Dr. Hankins' return.

Letter from the hon. secretary of the Adelaide Branch *re* fees for examination for industrial life insurance. Secretary's reply approved.

Resolved that the requests of the pharmacists for a conference *re* certain matters affecting the medical profession and the pharmaceutical chemists be granted; Drs. Abbott, Crago, and Rennie to represent the Council.

Resolved that Messrs. Sly and Russell be asked to prepare a bill to amend the Medical Acts with regard to Reciprocity of Registration and Duration of Medical Course.

Victoria.

The monthly meeting of the Victorian Branch was held on July 20th at their rooms. Dr. R. E. Weigall (president) in the chair, and a fair attendance of members.

Dr. R. E. Weigall read notes of a case of "Umbilical Hernia."

Dr. Henry expressed wonder that such a large mass should have caused so little pain. He had always found whenever there were ligamentous bands, pain was a constant attendant.

Dr. Vance saw this case and was very pleased with the result of the operation, which as a rule was not a success on account of the thinness of the recti muscles; but in this case, owing to the careful dissection of the aponeurosis and there being strong recti muscles, the esult was splendid.

Dr. Henry drew attention to the 80th birthday of Dr. Neild, one of the founders of the Branch, and it was proposed, and carried unanimously, that he should be invited as the guest of the members of the Branch to a supper.

Ballarat.

The ordinary bi-monthly meeting was held at the Ballarat Hospital at 8.30 p.m. on July 28th, 1904.

Present: President (Dr. J. T. Mitchell), Drs. Bennett, Champion, Cussen, Lidwill, McGowan, Steell, Usher.

Apologies: Drs. Gardiner, Hardy, Jordan, Nisbet, Affleck Scott, Robert Scott, T. A Wilson.

Minutes of previous meeting read and confirmed, on the motion of Drs. Cussen and Steell.

The President reported that the arrangements with the Union Bank had been satisfactorily completed, also that our representatives had attended the deputation to the Minister for Mines *re* the prevention of "miners' disease," and had placed the Council's views before the Minister.

The President reported the death of hon. member, Mr. T. R. Treloar, whose funeral had been attended by a number of members. He referred to the excellent work done by deceased, and deeply regretted the loss sustained by this Branch.

Drs. Cussen and McGowan moved—"That a letter of condolence be sent to deceased's son." Carried.

Correspondence was received from Dr. Nisbet and Medical Defence Association *re* advertisement of M. P. Bourke as bonesetter and medical practitioner, the latter enclosing letter from Chief Secretary's Office stating that as person referred to could not be connected with the advertisement a prosecution would be useless.

From New South Wales Branch, *re* subscriptions of colonial branches.

Moved by Drs. Cussen and Steell—"That letter be received, and secretary communicate with Victorian Branch and send them a copy of letter." Carried.

Dr. Champion read a paper on a severe case of Gastritis. In reply to Dr. Mitchell, there had been no case of influenza in the house, nor was that disease prevalent at the time. To Dr. McGowan, the supra-renal glands were normal.

Dr. Mitchell read his paper on "Perforating Ulcer of the Duodenum." He stated that since the circular had been printed he had changed the heading of the paper to "Notes on a Case of Gangrenous Pancreatitis," being of opinion that there was probably at first a hæmorrhagic pancreatitis, followed quickly by gangrenous disorganisation of the gland, which, bursting, formed an abscess in the lesser omental cavity and perforated the duodenal wall, discharging its contents into the bowel.

In the discussion which followed, the majority of those present were inclined to believe that the ulcer was the primary illness, and that pancreatitis followed on its rupture; also that the blood vomited had come from the pancreas and not from the ulcer.

The specimen from the above case was exhibited.

Other specimens were:—Patent foramen ovale, woman aged 40, who had had no symptoms during life—*Dr. Mitchell;* large myoma of anterior uterine wall—*Dr. R. Scott;* ante-mortem agony clot from right auricle of an epileptic—*Dr. Usher.*

The meeting then terminated.

Queensland.

A general meeting of the Branch was held on Friday, August 5th; Dr. W. S. Byrne presiding.

The Hon. Secretary exhibited for Dr. J. Cameron, of Ipswich, an extreme case of hare-lip and cleft palate.

Dr. Robertson exhibited a nasal polypus removed from a child of eight.

Dr. Lockhart Gibson showed two cases illustrating his method of performing Snellin's operation for entropion of lower and upper eyelids, and also cases of Odillo Maher's operation for entropion with transplantation of a strip of lip mucous membrane into the conjunctival sac, near the lid margin, and expressed his appreciation of it as a valuable addition to our methods of operating. He had found these two methods give completely satisfactory results in the worst cases of entropion.

It was resolved to accede to the request of the Toowoomba members to hold a meeting at Toowoomba on Saturday, October 8th.

It was resolved to adopt the recommendation of the Council that members should not advertise in the professional and trades list of the Telephone Directory.

It was unanimously resolved to adopt the recommendation of the Council that the A.N.A. should be placed in the same category as the B.A.F.S. Medical Innstitute, namely, that members of the Branch should not meet in consultation medical practitioners who act as medical officer to any branch of the A.N.A.

Dr. **Wield** read a paper on " Reminiscences of the Plague Panic of 1900."

South Australia.

The usual monthly meeting was held at the University on Thursday, July 28th, at 8 p.m. Present: Dr. C. W. Hamilton (president) and 33 members and three visitors.

Minutes of last ordinary meeting were read and confirmed.

Exhibits were shown by Drs. **Symons**, **Reissmann**, and **Harbison**.

Dr. **Poulton** also showed a woman, *æt.* 50 years, on whom he had operated seven weeks ago for carcinoma ventriculi; about one-third of the stomach was removed, the duodenal and stomach incisions closed, and a posterior gastro-jejunostomy was done. Patient's condition has improved, vomiting has ceased, and she eats anything now. She gets about freely, can work a little, and has gained one stone and five pounds in weight.

Specimens were shown by Professor **Watson** and others.

The **President** declared Dr. A. A. Lendon elected unopposed as Vice-President of the Branch.

Dr. **Newland** gave notice of motion at the next meeting in favour of a " Midwife's Registration Act " for the State.

Dr. W. **Anstey Giles** then read a paper on a case of " Congenital Pyloric Stenosis," which was discussed by Drs. Swift, Poulton, and Lendon. (See page 396.)

Dr. **Reissmann** read a short paper on the " Relation of Acute Rheumatism and Chorea," and Drs. J. C. **Verco** and **Bonnin** quoted other cases. (See page 407.)

Dr. **Reissmann** also read a paper on a case of " Angio-Neurotic Oedema," and Dr. **Gunson** read short notes on two typical cases. Dr. J. C. **Verco** congratulated Dr. Reissmann on his paper and added some comments.

Hudson's " Eumenthol " Jujubes (Registered) are a Gum Jujube containing the active constituents of well-known Antiseptics, Eucalyptol, Thymus Vulg., Pinus Sylvestris, Mentha Arv., with Benzo-Borate of Sodium, etc., and exhibit the antiseptic properties in a fragrant and efficient form. Sold by all chemists; tins, 1s 6d. Are Antiseptic, Prophylactic, reduce Sensibility of Mucous Membrane. Mr. W. A. Dixon, F.I.C., F.C.S., Public Analyst of Sydney, after making exhaustive tests, says:—" There is no doubt but that 'Eumenthol' Jujubes have a wonderful effect in the destruction of bacteria and preventing their growth. . . . I have made a comparative test of 'Eumenthol' Essence and Creosote, and find that there is little difference in their bactericidal action."—[Advt.]

THE BATTLE OF THE CLUBS.

Balmain.

Our readers will remember that some trouble was caused at the Balmain Hospital a few months ago through the action of the committee of management appointing as its paid medical officer a member of the profession who was ineligible for membership of the British Medical Association. A dispute had existed for some time between the Board of the Balmain United Friendly Societies' Dispensary and the B.M.A., and at length the members of the latter body withdrew from the dispensary staff. Dr. P. J. Kelly refused to follow the other members, and was reappointed to the staff. He was also at the time filling the position of medical officer at the hospital, and, despite the pressure that was brought to bear by the Balmain Medical Association, he was reappointed to the position at the annual election of the medical staff. The members of the B.M.A. who were acting on the honorary staff of the hospital then tendered their resignation in a body. These were accepted, and other medical men who were ineligible for membership of the B.M.A. were appointed in their stead. The committee soon discovered that the number of the hospital patients were growing less, and there was not sufficient work to keep the staff employed. The committee then held special meetings for the purpose of trying to arrange for a settlement of the difficulty. Dr. Kelly voluntarily offered to resign from the position of paid medical officer if it would assist the committee, and when he found that the board could do nothing satisfactorily withou his resignation he gave a month's notice, to take effect from July 31st, and it was decided to accept the resignation. This action of Dr. Kelly's removes the whole difficulty between the hospital committee and the British Medical Association, but it is recognised that the latest developments will prove very unsatisfactory to the Dispensary members, who have considered that Dr. Kelly was being treated most unfairly by his fellow practitioners. It is stated that some difficulty will likely present itself to the committee in the matter of financing the institution. For many years the friendly societies have taken an active part in supporting the hospital, and as they consider that Dr. Kelly has been made to suffer loss owing to the stand he took on their behalf, it is feared they will carry out their threat to withdraw their support from the hospital.

We hope, however, that the Dispensary authorities, who, we understand, have already had some difficulties with their present medical staff, will fall in with the request of the B.M.A. to dissociate themselves entirely from the A.N.A., and to provide remuneration for their medical officers on a more satisfactory basis than exists at present.

Marrickville.

In the Western Suburban district of Marrickville, Sydney, the lodge rate of payment of medical officers is 18s per member per annum. One lodge, however, the Excelsior, N.I.O.F., at Marrickville, has hitherto not paid at this rate, and so has not lived up to the motto implied in its name. The medical officers, Drs. Perkins, Wade, Hodgson, and Chenhall, have repeadedly requested the lodge to raise the rate to that paid by the other lodges in the district, but without avail. These gentlemen have now sent in their resignations, and the Western Suburbs Medical Association is assisting them in their action by asking its members not to oppose the old medical officers should the lodge declare the positions vacant and invite applications.

REVIEW OF CURRENT MEDICAL LITERATURE.

MEDICINE.

Tuberculous Pericarditis.

Stockton (*American Medicine*, June 11th, 1904) remarks that although tuberculosis has been accepted as a cause of pericarditis, and the frequency of its occurrence has been urged by Osler, yet some authors regard it as of rare occurrence. This difference of opinion is probably due to the fact that the tuberculous lesions are sometimes not easily discovered. The gross appearances are sometimes not unlike that of rheumatic or other forms of the disease, but when submitted to a proper bacteriological examination, a proportion of cases regarded as simple pericarditis will turn out to have the essential cause of tuberculosis. The author records three cases with great care and detail, and then sums up his conclusions as follows:—1. Tuberculous pericarditis is not a rare affection. 2. The diagnosis is usually not made except in cases with simultaneously active tuberculous processes in other parts. 3. The concurrence of pleurisy with blood-stained effusion may be regarded as suggestive. 4. The pericarditis may be of a chronic obliterative type, or there may be massive effusion, generally sanguinolent, rarely purulent. 5. It may be acute, continuing for but a few days, or chronic, existing for many months. 6. It may be a part of a multiple serositis, and the proportion of cases in which at least one or more of the pleural cavities are involved is remarkable. 7. The disease is to be regarded as a secondary affection, although from a clinical point of view some cases may be looked upon as primary. 8. The point of origin of the infection is often found in the bronchial and mediastinal lymph-nodes, although these may be quite exempt from the disease. The infection may be direct from continuity of tuberculous tissue, or by transmission through lymph vessels or through the circulation. 9. The heart may be greatly enlarged, normal in size, or even somewhat small. 10. Some observers believe that occasionally the process subsides and that comparative cure results.

Myelopathic Albumosuria.

Meltzer (*Medical Record*, June 18th, 1904) read a paper on this subject at a meeting of the Harlem Medical Association, and remarked that the case upon which he based his paper had been one occurring in his private practice about a year ago, and he believed to be the first one recorded in the City of New York. He stated that there were reasons for believing that the disease was more frequent in its occurrence than was supposed, and that it was probably often confounded with nephritis and rheumatism. The essential clinical points of the disease are: Pain of the bones, especially of those of the trunk, the presence of Bence Jones' albumose in the urine, and a more or less rapid decline leading to a fatal termination. The author reports the case of a man aged 45 years, who first came under his notice in May, 1902, for pain in the left side, in about the sixth intercostal space, a little to the left of the mamillary line. He was also suffering from troublesome cough of laryngeal character. Subsequently, at various intervals, he complained of various pains about the ribs and in various bones. Examination of the urine showed what at first was taken to be a precipitate of albumin, but further investigation showed it to be really albumose, and the diagnosis was then made of multiple myeloma. His pains became agonising in character, and no relief was obtained from salicylates or opiates, but the author found that ice applied to the tender spots gave infallible relief; on one occasion ice being maintained constantly over the sternum for ten days. He gradually became anæmic, his heart dilated, and he died, apparently from pulmonary œdema, in February, 1903. The author describes the tests for albumose, and gives an account of its chemical relations. In discussing the diagnosis of these cases, he remarks that his own case did not come to autopsy, so that his diagnosis was based purely on the clinical signs. In general, myeloma and the presence of albumose in the urine go together. Although there are cases of myeloma recorded in which no albumose is found in the urine, the latter, it seems, was not examined continually or long enough to make sure that no albumose existed in the urine at any time. In some of the recorded cases the albumose appeared late, or disappeared again. One case is recorded by Askanazy in which albumose was present in the urine, but there the bones contained no myeloma; it was a case of lymphatic leukæmia. Some other cases recorded have had complications, such as myxœdema and pernicious anæmia. In most of the uncomplicated cases in which a blood examination was made, the conditions were found to be not much altered. In some cases there were swellings of the bones, spontaneous fractures, and considerable deformity. Nervous symptoms, such as paralysis and anæsthesia of circumscribed parts, have been described by some writers, but these symptoms do not appear to be essential features of the disease. The kidneys were found affected in only a few cases. In quite a large number, intra-ocular hæmorrhages have been found. The course of the disease is variable. The longest case on record was that of Dr. Loos, which lasted eight years. Some cases last less than a year. No treatment is known to have any influence on the progress of the disease; but it is well to bear in mind the author's recommendation of ice as a sedative for the bone pains.

Perforation in Typhoid Fever.

At the fifty-fifth annual meeting of the American Medical Association held in June last, a discussion on this question was introduced by Morris Manges, of New York (*American Medicine*, June 11th, 1904). He reported a series of 19 cases, in 16 of which operation had been performed. The diagnosis was verified by operation or by autopsy in all but one case. The age of the patients varied from 6 to 42 years, and the perforation was on the ninth to the fifty-eighth day of the disease. Pain is the most important symptom of perforation; it occurred in 17 of the cases, the other two being delirious, and was the first symptom in 14 cases. Rigidity was present in 16. In order to make variations in liver dulness of value in diagnosis, the condition should be noted every day of the disease; the time now spent in examining the spleen might be more profitably spent in making a careful outline of the liver. The temperature fell in three cases, rose in nine, and was unchanged in four. The pulse rose in 12, was unchanged in four, and fell in none. The leucocytes rose in seven, fell in three, were unchanged in six. Blood pressure is not an important aid in diagnosis. Operation was performed from 5 to 72 hours after perforation, though in some instances the *time* of perforation is problematic. The possibility of spontaneous cure after perforation is raised by the one case reported as such. Manges believes this to be possible if the opening is small, and is at once shut off by adhesions. But in all the cases reported as such the recovery is only five per cent., and this leaves no doubt as to the proper course to pursue, this being operation in all cases. General anæsthesia is to be preferred to local. Special attention should be given to the diagnostic significance of pain, which is variable in degree, situation, and character. In the discussion which followed, Professor Osler remarked that he was present when in 1886 J. C. Wilson read his paper advocating operative interference in typhoid perforation, and though at that time he felt very conservative regarding the proposition, his views had since changed. Two things he considered very necessary to lower the mortality from this complication:—1. Intelligent watchfulness on the part of the physician of the progress of the disease. In general hospitals the chief should put down in writing what the house physician should especially look for in the typhoid cases: if they appear, help should be summoned within a few minutes. 2. The prompt co-operation of the surgeon. It is better in many cases that the house surgeon should operate, as the time spent in summoning the chief may be too long. The record of Johns Hopkins Hospital is now 19 cases with 7 recoveries. J. C. Wilson said he insisted on hospital residents examining the abdominal wall of typhoid fever patients at every visit to note if rigidity be present; the merest appearance of rigidity must be reported to the visiting physician at once. If abdominal pain be present the surgeon is at once called, and the operating-room prepared, as a matter of precaution, while he is coming. Yet there are cases where abdominal pain, sudden and severe, accompanied by rigidity, comes on, and in a few hours has passed away, and no perforation has occurred. Wilson is at a loss to explain how the symptoms of perforation can occur without the presence of that complication. He further considered that hæmorrhage was often the precursor of perforation, and hence extra care was needed in such cases. Manges, in closing the discussion, said that the trouble was that many physicians want too much before making the diagnosis of perforation; they must have all the symptoms before they are willing to risk the diagnosis of perforation, and then the opportune moment has passed.

Diagnosis of Gastric Carcinoma.

Rolleston (*Practitioner*, May, 1904), in reviewing some recent observations on gastric affections, summarises two papers which have recently appeared on this subject. Arncill, in a paper based on the examination of 40 cases, discusses the question whether any of the modern gastric methods furnish us with the means of making an early diagnosis of gastric carcinoma. While admitting that the association of a persistent absence of hydrochloric acid, the presence of lactic acid, Oppler-Boas bacilli, yeast, and retained food, with a tumour and cachexia, in the vast majority of cases means carcinoma, and that even in the absence of a palpable tumour, this diagnosis would be justifiable, he insists that the positive diagnosis of a case in its early stage is absolutely impossible. He finds that a persistent absence of free hydrochloric acid from the stomach contents is more constant in, and characteristic of, pernicious anæmia than of carcinoma of the stomach, and that in a small percentage of undoubted cases of gastric carcinoma, there is a fair amount of free hydrochloric acid. Laboratory methods alone will not, therefore, lead to a correct diagnosis; the medical man must take a broad view of the case from the point of view of physical examination, plus assistance from laboratory examinations. Mouisset and Tolot have investigated the question of the diagnosis of gastric carcinoma from the point of view of the anæmia, leucocytosis and the differential leucocyte count. They have found that a diminution in the number of erythrocytes has a definite relation to the constitutional condition; thus it is absent while the bodily nutrition is maintained, and appears when the cachexia appears. The fall of the corpuscular hæmoglobin value is an important sign of gastric cancer, Mouisset pointed out in 1891 that this fact was of use in distinguishing this disease of the stomach from hepatic cirrhosis, gastric ulcer or catarrh, and, of course, from pernicious anæmia. This fall may be absent in the early stages of the disease, or when sudden alterations occur in the number of erythrocytes. Leucocytosis, when not due to inflammationary complications, is generally a late event in the course of the disease, and only occurs when cachexia has come on. The differential leucocyte count, which has been thought to show a mononuclear increase by Hayem, a polymorphonuclear increase (Strauss and Rosentein), or a mononuclear in the early stages, followed in the late stages by a polymorphonuclear increase, did not appear to the authors to justify any conclusions on the diagnosis of gastric carcinoma.

The "Coin-Percussion Sound" in Pneumothorax.

Langwill (*Scottish Medical and Surgical Journal*, May, 1903) states that the ordinary method adopted to obtain the "bell" sound in pneumothorax is open to fallacy. When two coins are "chinked" together upon a patient's chest at a distance of only a few inches from the ear of the ausculator, a ringing sound more or less present *external* to the chest wall, even when no pneumothorax is present, is conducted to the stethoscope along the parietes. But if instead of using the coins the chest wall be "flicked" by the finger and thumb while the physician auscultates, it will be found that the "flick" or "fillip," which is heard through the stethoscope over the normal chest as a dull thud, is at once converted into a ringing or chiming sound whenever the pneumothorax area is reached. The alteration in note is much more striking over the affected area than it is when the coins are used, since there is then not a mere difference in the *intensity* but in the *character* of the sound. What was a dull or flat note over other parts of the chest becomes musical (ringing and bell-like) over the area of the pneumothorax.

PATHOLOGY.

The Relation of Eosinophile Leucocytes to Bacterial Infection.

Opie (*Bulletin of the Johns Hopkins Hospital*, March, 1904) has made a preliminary communication on this question. Certain bacilli, such as the B. tuberculosis and B. choleræ suis, which produce somewhat chronic fatal infections in guinea-pigs, cause the eosinophile leucocytes to disappear gradually from the circulating blood, and after death few eosinophile cells can be found in those tissues in which they are usually found in abundance. During more acute infections produced by inoculating bacteria into the peritoneal cavity of guinea pigs (bacillus of Friedländer, bacillus pyocyaneus, streptococcus pyogenes), eosinophile leucocytes quickly disappear almost completely from the peripheral circulation. After the inoculation of the bacillus pyocyaneus, eosinophiles almost completely disappear from the peripheral circulation, so that within 24 hours the proportion may fall from five or ten per cent. to less than one per cent. The number of eosinophiles then gradually increases, and at the end of four or five days, both the relative and absolute number of these cells may considerably exceed that present in the peripheral circulation before inoculation. At the end of six or seven days the number of eosinophiles is again normal. When B. pyocyaneus, B. anthracis, or B. Friedländer are introduced into the peritoneal cavity of the guinea-pig, the large mononuclear and eosinophile cells contained in the peritoneal fluid form compact clumps, which adhere in great part to the surface of the omentum, so that for a time eosinophiles have almost completely disappeared from this fluid. At the end of about an hour they have again made their appearance. Some of the eosinophiles normally present in the tissues of the mesentery and omentum doubtless make their way into the cavity, but soon eosinophiles begin to accumulate in the blood-vessels of both membranes, but particularly in those of the mesentery. These cells adhere to the wall of the small veins and migrate into the surrounding tissue. This process begins about one hour after inoculation, reaches its maximum several hours later, and is more marked the larger the quantity of bacteria introduced and the more virulent the organism employed. At the end of about four hours, when the number of eosinophiles in the peripheral circulation has undergone well marked diminution, the same cells have accumulated in great number in the vessels of the inflamed mesentery and omentum. Similar changes are much less marked below the peritoneum or the abdominal wall and below the serosa of the viscera. Though eosinophiles are migrating from the blood vessels into the peritoneal cavity, their relative number in the peritoneal exudate diminishes, and at the end of four hours is only one or two per cent. Polynuclear leucocytes at this time have accumulated in such immense numbers that they constitute an overwhelming proportion of the cells present. Eosinophiles are present in the cavity at the time of inoculation, but only after a period of about an hour do they begin to accumulate in increasing numbers. Polynuclears with fine granulation accumulate in great quantity upon the surface of the omentum, and form compact clumps held together by a network of fibrin; eosinophiles in large numbers penetrate into these masses of cells. Unlike the polynuclears, eosinophiles rarely, if ever, acting as phagocytes, ingest bacteria. Eosinophiles upon the surface of the omentum, doubtless under the influence of bacterial poisons, undergo degenerative changes, of which nuclear fragmentation is the most characteristic. In such cells the eosinophile granules are still preserved. Under the influence of severe bacterial infection, eosinophile myelocytes, together with other elements, usually regarded as characteristic of the bone marrow, accumulate in the spleen, and may be found in the blood. The occurrence of this phenomenon within from two to four hours after inoculation demonstrates that these elements are derived from the bone marrow and are not formed in the spleen. Myelocytes, both with fine and with coarse granulation, which have found their way to the spleen, here multiply by karyokinetic division. These observations demonstrate that eosinophile leucocytes have a part in the inflammatory reaction which follows the entrance of bacteria into the body. They are attracted from the blood to the site of inoculation and from the bone marrow into the blood. Destruction of eosinophiles results and is followed by regeneration.

Protozoon-like Bodies found in Scarlet Fever.

F. B. Mallory (*Journal of Medical Research*, January, 1904) reports the discovery of protozoon-like bodies in four cases of scarlet fever. In the skin of a boy who died 48 hours after the first appearance of the eruption of scarlet fever, certain peculiar bodies were found in the protoplasm of the epithelial cells of the epidermis, between these cells and free from the lymph vessels and spaces of the corium just beneath the epidermis. The great majority of these bodies vary in size from a little less than two to six or seven microns in diameter. They present a series of forms, definite morphology, which strongly suggest that they are the various developmental stages of a protozoon. Some of these bodies are round, oval, elongated, and lobulated, and stain sharply with methylene blue. Most of these bodies seem to be composed of a close-meshed reticulum, finely granular, and some of them contain one or more vacuoles. Another group of these bodies present a radiate structure; these are found both in vacuoles in the protoplasm of epithelial cells and free in the lymph space and vessels of the corium, just underneath the epidermis. These radiate bodies are from four to six microns in diameter, and are usually spherical in shape, but occasionally elongated. They contain a central round body, around which are grouped in optical section from 10 to 18 narrow segments, which in some cases are united, but in others are sharply separate laterally from each other. These bodies are only found in the skin in this case; careful study of the tongue and various internal organs failed to show any bodies resembling those in the skin. The findings in this case lead to a careful study of such other material as was available. In a second case they were found in a piece of skin as numerous as in the first case, but they did not stain so well. In the third case they occurred in small clumps in the skin, and one rosette form was found in a superficial lymph vessel of the corium. In a fourth case they were found in small numbers only in the epidermis of the tongue. In six other cases, where death occurred early in the disease, no bodies were found. A number of cases in the desquamative stage of the disease were examined with negative result. For the demonstration of these bodies, the most successful method was the staining of paraffin sections of Zenker-fixed material, first in a strong solution of eosin and then in a dilute alkaline solution of methylene blue. This method was found to give the sharpest stain, and the most marked contrast. The author discusses the possibility of these bodies being artifacts, degenerations, or protozoa, and concludes that all the evidence is in favour of the latter view. While he personally believes that these bodies are protozoa, and have an etiological relation to scarlet fever, he is far from claiming that such a relation has been proved.

PÆDIATRICS.

Artificial Feeding of Infants.

Hutchison, Robert (*Lancet*, September 19th, 1903) recapitulates the chief points dealt with in his address as follows:—

1. The first essential in the artificial feeding of infants is to have a definite plan upon which to go, and to avoid haphazard procedures.

2. Diluted cows' milk, condensed milk, and peptonised milk may be regarded as the positive, comparative, and superlative of digestibility respectively, and should be tried in that order until the digestive power of the child is suited, due regard being paid to the details of administration above laid down.

3. Periodic weighing of the child is the only test of the success or failure of the food selected.

4. In cases in which even peptonised milk fails to give good results, great benefit often follows the ad-

ministration of grey powder, even in cases in which there is no reason to suspect a syphilitic taint.

5. In spite of all care in the use of the above methods, there remains a residuum of cases in which progressive wasting exists. Many of these seem to be babies who are unable to digest the casein of cows' milk in any form.

6. In such a case one should try to procure a wet nurse for the child, and, failing that, one must eliminate casein from the diet by making whey the basis of the feeding mixture.

7. The use of a patent food as the sole article of diet for a baby is rarely if ever necessary, so long as cows' milk can be obtained either fresh or condensed.

8. If a child is unable to digest much cows' milk it is often worth while to try the effect of adding a little starchy food to the diet, even at an early age, for inability to digest milk appears to be sometimes accompanied by an unusual capacity for the conversion of starch.

An Unusual Case of Pseudo-hypertrophic Muscular Paralysis.

W. E. Foggie (*Scottish Medical and Surgical Journal*, December, 1903) records an exceptional case of this disease. The patient first came under observation in September, 1899, being then 16 years of age, when the diagnosis was made of pseudo-hypertrophic paralysis. There was no family history of any similar condition. The patient was apparently healthy at birth, and walked quite early. When he was five or six years old, some stiffness was noticed in the right leg, but no special attention was paid to it. He had scarlet fever at nine years, and this seems to have hastened the muscular changes. Since then he has been noticed to be slow at going upstairs and to require to help himself by putting his hands on his thighs. When he first came under observation, the gait was already markedly affected. His feet were kept well apart, while there was a tendency to throw back the shoulders and upper part of the body and to arch forward the small of the back. The gait was waddling in character, and when he tried to run, the head fell forward into the shoulders. He could rise from the ground, but only by spreading out his legs and climbing up the thighs in the usual characteristic fashion. He had then a bright, healthy appearance; his body was well developed, and his height was in keeping with his age. Muscular development was obviously affected. The calves were hypertrophied and firm, but the other muscles affected were atrophied. The thigh muscles were wasted and soft. The pectorals were wasted in the lower halves. The latissimi dorsi were absent. The biceps and triceps on each arm were wasted in contrast to the firm and apparently unaffected muscles of the forearms and hands. Muscular power was very weak, especially in the flexors and extensors of the hips and knees. The muscles of the upper arms and shoulders were very weak. The knee-jerks were absent. The plantar reflex was present and of the flexor type. The face and tongue were not involved. He was seen at various times, but there was no change till July, 1901, when he was noticed to be drawing up the right heel. Walking was becoming more difficult throughout the year 1902, and by August he had finally gone off his feet. Since then there has been distinct wasting of the calf muscles, although they still look large. In October, 1902, scoliosis was distinct in the lower dorsal and lumbar regions. By August, 1903, he was practically unable to rise. The tongue was noticed in August, 1901, to be distinctly enlarged. From then till now it has been steadily increasing in size. It is firm and swollen, and even at times hangs from the mouth. It can be moved fairly freely. In October, 1902, and still more in December, the open mouth, the loss of facial expression, and the thickening of the lower lip began to attract attention. These have increased a little of late. The lower lip is not impeded in its movement in any way. Enlargement of the tongue is rare in this disease. It is the peculiar honour of Erb to have correlated in a broad fashion all the different types of muscular atrophy of purely muscular origin, showing that they present certain fundamental points of agreement, and including them all under one name, viz., progressive muscular dystrophy. The case here recorded, commencing as a typical pseudo-hypertrophic muscular paralysis, and going on into the type with facial involvement, is an additional argument in favour of his view.

Two Cases of General Gonococcal Peritonitis in Young Girls under Puberty.

W. P. Northrup (*Translations of the Association of American Physicians*, 1903) records two instructive cases in sisters, aged nine and eleven years respectively. The disease commenced as a vulvo-vaginitis, developing one week later into a peritonitis. The source of infection was a female in the household, with whom each occasionally shared a bed. The girls slept together, and it may be that case II contracted it from case I, or that both acquired it from the same source. Their symptoms had the same sequence, those of case II developing regularly one week behind case I. Case I showed symptoms referable to the appendix, and was operated on for appendicitis; case II was not. Both fully recovered. Case I will be quoted in detail: The child had been under medical treatment for a week for a vaginal discharge, which was treated with cleansing washes, and which appeared to be getting better, till, on the seventh day, the temperature suddenly rose to 103°. She had abdominal pain, vomited once, and had great prostration; the pain was greatest in the right iliac fossa, which was very sensitive to pressure; her appearance was striking, death-like pallor and profound prostration. The temperature rose to 104.5° some five hours or so after the onset; there was moderate abdominal distension, and painful micturition. The vaginal discharge was thick and creamy, and contained gonococci. A surgeon was called in, and noticed rigidity over the appendix and acute pain on pressure; no mass felt. Right rectus muscle was rigid; breathing thoracic. Laparotomy was performed immediately, being some six hours after the onset; at the operation the peritoneum was found very much injected, but beyond this and a few drachms of fluid found in the pelvis, it was normal; the appendix was healthy, and the tubes and ovaries were not removed. The child recovered without incident. The vaginal discharge continued for three months. Case II, a sister of the first, had been sleeping with case I and with the female by whom case I was probably infected. Cases I and II ran much the same course. Vaginal discharge was noticed one week after the beginning of the discharge in case I, and in this case the tenderness and pain were always referred to the region of the spleen. After seeing case I, there was no thought of operating on case II. Complete recovery took place. In nearly all the recorded cases, the sudden onset took up the attention of the physician, and the vaginal discharge was discovered afterwards. These cases were in bed from the first, under careful medical treatment; this did not prevent the extension of inflammation.

CORRESPONDENCE.

London.

(FROM OUR OWN CORRESPONDENT.)

The Harveian Oration—Scottish Birth Statistics—The Medical Society of London—The University of London—Medical Officers of Health—The General Medical Council.

It has hitherto been the custom at the Royal College of Physicians to have the Harveian oration delivered on St. Luke's Day, but this year the date was changed in order to meet the convenience of many who could more readily attend in June than in October. The orator on this occasion was Dr. Richard Caton, of Liverpool, who divided his address into two parts—one dealing with Egyptian medicine and the earliest enquiries concerning the circulation and diseases of the circulatory system, and the other dealing with the present day preventive treatment of certain forms of valvular disease. In the earlier portion of his remarks, Dr. Caton descried a great temple which stood outside the wall of Memphis, and which was dedicated to I-em-hotep, a learned physician who lived about the year 3500 B.C., whose eminence was such that he became, in the course of ages, deified as the Medicine God. "I-em-hotep," says Dr. Caton, "rises before us as one of those intellectual giants who take all knowledge for their province. In his comprehensiveness he surpasses Leonardo de Vinci, or our own Linacre. He is distinguished as a Physician, a Minister of the King, a Priest, a Writer, an Architect, an Alchemist, and an Astronomer—great in all, but greatest in medicine. In the view of Egypt he is a god." The priests of I-em-hotep prescribed daily for the sick, and were not unlearned in the anatomy of the human body. Though they do not seem to have recognised the pump action of the heart, they were apparently aware that the blood flowed from it and were possessed of an elementary and partial conception of the plan of circulation. The concluding portion of Dr. Caton's interesting oration was devoted to a short consideration of the unsatisfactory results which have hitherto attended most efforts made to prevent the onset of valvular disease in the course of rheumatic fever. He reiterated his well-known views as to the value of prolonged rest, accompanied by the administration of iodides, and by gentle stimulation of those cutaneous nerves which are in physiological relationship to the heart.

The annual report regarding the births, deaths, and marriages in Scotland in 1903 states that the population in the middle of the year was estimated to be 4,579,223—the males numbering 2,229,414, the females 2,349,809. The corresponding figures for 1902 were 4,531,299, 2,204,503, and 2,326,796. The increase of estimate, namely, 24,911 males and 23,013 females, in all, 47,924, is based on the average annual increase between the census of 1891 and that of 1901. Excess of births over deaths during 1903 amounted to 57,526. The births of 133,499 living children were registered during the year. This is equivalent to a birth rate of 29.2 per thousand of the estimated population, and is the same as the birth rate for the year 1902. It is smaller than than that for all other preceding years. During the 12 months there were 75,973 deaths, which is equivalent to an annual mortality of 16.59 per thousand. The actual number is less than in any year since 1896, and the mortality rate is the smallest recorded since the opening of the Registrar-General's office, now nearly 50 years. Compared to the previous year, 1902, the actual number of deaths shows a diminution of 1973, and the mortality per thousand one of 0.61. The marriage rate was 7.06 per thousand of the population, which was very nearly the same as for the previous year.

The annual conversazione of the Medical Society of London was held in the rooms of the Society, 11 Chandos-street, W., on May 16th, when a large company was welcomed by the President, Dr. F. de Haviland Hall. The oration customarily delivered on these occasions was given by Sir Isambard Owen, who selected as his subject "The Future of Medical Education in London." Having contrasted the interest Continental States displayed in scientific research and public education with the indifference evinced towards them by the generality of Englishmen, and pointed out that this indifference could only be a passing phase, due to patent historical causes, Sir Isambard expressed the hope that the reports of the Mosely Commissioners, with their marvellous tale of recent educational progress in America, and the fabulous amounts of public and private money freely lavished upon it, would at last awaken attention here to the backward state of things at the heart of the British Empire. Of all forms of higher education, he submitted, none could lay greater claim to public support than medical education. Its efficiency was a common interest, and the medical profession in this country could not be charged with making a selfish use of its knowledge or failing to meet the unsparing demands made on its own generosity. A fifth of the whole population of London, he believed, had at some time or other learned to rely on the public or private charity of the medical practitioner. Medicine, that gave so much, might ask something in return. The development of medical education in London had been almost entirely due to voluntary effort, and few non-medical persons knew what the work really meant. Till lately the medical schools had cost the hospitals nothing; on the contrary, the hospitals had benefited by their existence to the value of at least some fifty thousand a year. The strain on the voluntary system of medical education had been growing year by year more severe, as the requirements steadily advanced, and a limit to endurance must come unless London soon awoke to a sense of its responsibility in the matter. It would be to the lasting disgrace of London if it should ever lose the position it had long held as the chief seat of English medical teaching. The unendowed London schools had still to carry the entire burden of the preliminary academic training of their students, a task which elsewhere was now undertaken by endowed Universities and University Colleges. Until the reconstitution of the University of London, no practical way out of the difficulty could be seen. Sir Isambard then detailed the plan which the University had adopted of establishing a public institute of Medical Sciences within its bounds and under its direct control. Including buildings, the Institute would cost some £375,000 to establish. As the State declined all responsibility for professional education in England, the University could only look to enlightened private liberality. The interest involved was a public and not a professional one, and it was to the public the University appealed. The King himself had most graciously evinced his sense of the value of the object aimed at by heading the subscription list, and the University trusted that his Majesty's august initiative would meet with many prompt imitators. Sir Isambard, whose address was frequently applauded, was awarded a cordial vote of thanks on the proposition of Dr. Kingston Fowler, seconded by Mr. Pearce Gould.

The Earl of Rosebery, Chancellor of the University of London, presented, on May 16th, to the new graduates of the University the degrees and honours won by them during the year. There were as many female as male recipients. The principal guests of the Senate were: The Lord Mayor; Dr. Pye Smith, the Vice-Chancellor; Sir Arthur Rücker, Principal; Professor Unwin, Lord Davey, Sir William Collins, Dr. Pryce, Professor Ker, Sir Edward Busk, Sir Michael Foster, M.P.; Sir Henry Roscoe, Sir Henry Howse, Sir Frederick Bridge, Sir William Ramsay, Lord Kelvin, Mr. J. W. Benn, the Chairman of the London County Council; Sir John Macdonnell, Dr. Turpin, Professor Judd, Professor Capper, Dr. Mears, Sir Albert Rollit, M.P.; Dr. Carey Foster, Dr. Headlam, and several Masters and Wardens of City Companies and Mayors of Metropolitan Boroughs. The report of the Principal (Sir Arthur W. Rücker) on the work of the University during the year 1903-4 stated that perhaps the chief educational event of the year had been the establishment of a new education authority for London. The relations between the Technical Education Board of the London County Council and the University had always been cordial, and there was no reason to doubt that the new authority would be mindful of the importance of University teaching and research. The fact that the Chairman of the Education Committee, Sir William Collins, had for many years been a member of the Senate, and that other elected and co-opted members of the Committee were also Senators, afforded a guarantee that the interests of the University would be adequately represented in the deliberations of the Education Committee and of the County Council itself. There had been a very large increase in the number of matriculants. During the present year the King had given a hundred guineas to the fund which was being raised for the establishment of an Institute of Preliminary and Intermediate Medical Studies. This proof of his Majesty's interest in the work of the University could not but be helpful and stimulating to all those engaged in it. Large sums had also been given or promised by various donors for the purposes of University work in London. The year had been one of success in the present and of hope for the future. There was a continuous increase in the number of undergraduates; and the researches undertaken both by teachers and by students afforded proof that the higher work of the University was not overshadowed or checked by the complicated arrangements which were, perhaps, inevitable in the present stage of their existence. Another year had proved that the internal and the external departments of the University could flourish side by side, and, as experience was lulling the fears, which were once freely expressed, that it would be impracticable to combine the two under one management, there were already signs that it might be possible even in the present, and still more in the future, to simplify the mechanism by which they were united and controlled.

The Incorporated Society of Medical Officers of Health is drawing public attention and preparing to take Parliamentary action on a matter which affects the status of an important set of officials who are charged with the administration of the laws affecting health and sanitation, and also in the highest degree the public interest. The medical officers say that Parliament is constantly adding new duties to their official routine, and yet they have no security of tenure. They point out that the poor law medical officer, who is only responsible for the health of the individual outdoor or indoor pauper, has a permanent appointment, whereas the medical officer of health, who is responsible for the health of the community, has an engagement running in most cases from year to year, and in no case beyond five years. The result is that medical officers are not in a position of independence, and many cases are on record with the Society in which these officers have been absolutely penalised for doing their duty. It is easy to see that in small communities, where the local government is in a few hands, the medical officer may easily run counter to his board. Water supply in rural districts, infectious disease in seaside communities, insanitary areas, and all those points which require careful attention are fruitful subjects of friction between the medical officer and the local health authority; and so great is the friction very often that the medical officer is dismissed at the end of his period for doing his duty. The Incorporated Society points out that the Local Government Board, which pays half the salary, has the right to insist that the appointments shall only be terminated for bad behaviour, and are about to take steps to draw the attention of Parliament to the subject, with the object of placing these important officials above the caprice of small local authorities.

The seventy-ninth session of the General Council of Medical Education and Registration of the United Kingdom was opened on Wednesday, May 25th, at 299 Oxford-street. The President, Sir William Turner, occupied the chair, and delivered the usual address, in the course of which he said that certain bills had been introduced into Parliament which bore on the Medical Act. More than once he had referred in his opening address to the attempts made to promote the establishment of reciprocal relations between the Dominion of Canada and the United Kingdom in regard to practice and admission to their respective medical registers. Up to this time, notwithstanding the efforts that had been made both in Canada and in the Parliament at home, a working scheme had not been arrived at. General Laurie, whose name is associated with the attempts at legislation in question, had this session introduced into the House of Commons a bill to meet the difficulty occasioned by one of the provincial Legislatures in Canada declining to renounce its present power of independent legislation, and to consent to the formation of a register for the whole Dominion, as was provided for, subject to the consent of the local Legislatures, in the Canada Medical Act, 1902. This bill provided that his Majesty might, if he thought fit, declare by Order in Council that where any part of a British possession was under a central and also a local Legislature, as was the case in Canada and some other colonies, the part under the local Legislature should, for the purposes of the Medical Act, 1886, be deemed a separate British possession. Should General Laurie's bill become law, Part II of the Medical Act, 1886, could be applied to any province in Canada which, in the opinion of his Majesty, should afford to registered medical practitioners of the United Kingdom such privilege of practising in the province as to his Majesty might seem just. Bills had also been introduced during the present session of Parliament to facilitate the adoption of metric weights and measures in this country in substitution for our present methods. On the second day of its meeting the time of the Council was devoted to due consideration of cases which had come before the Penal Cases Committee. The President announced that the Executive Committee had appointed Mr. Bryant to succeed the late Sir George Duffey as inspector of final examinations. The business of the session otherwise consisted mainly in the reception and discussion of the reports of the various committees. Changes in the *personnel* of the Council have been caused by the retirement of Mr. Bryant and the

[illegible]

of the Liverpool Uni-
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NERS' WIDOWS AND
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Adam Dick,
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August 20th, 1904.

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ROPOSITIONS.

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time being of the Medical Association for the said funds, *i.e.*, the above-mentioned board. All sums so donated in excess of a reserve amount (to be duly determined) to be invested by further insurances upon the younger members of the association. Such policies not to exceed £250.

Members wishing to effect further insurances upon their lives may do so for the benefit of their estates, under similar conditions, the association contracting to maintain same free from mortgage, except for maintenance, on such behalf.

Preliminary Expenses.—The examining medical men to be invited to donate 10s 6d out of the usual guinea fee for each examination, in favour of the fund. The agent writing the business on the selected plan to be required to donate 10s 6d per cent. to the fund for every case so written. From these two sources the necessary preliminary expenses should be amply covered.

Cash Receipts.—Assuming that 500 members only took out a policy for £100 each, on the plan now submitted for approval, no less than 250 guineas would be at once available in cash from the returns of half fees by examiners.

Proposed Plan of Insurance.—The plan under consideration is a twenty payment life plan, with a guaranteed contingent addition of £2 10s per £100 for every annual premium paid in the event of death during the 20 paying years. On a basis of 500 members, a guaranteed interim bonus of £1250 annually would accumulate in contingent addition guarantees. At the end of the twentieth year, should the applicant be living, those contingent (or interim) additions disappear in favour of the actual bonus additions to the policy. Now, for general purposes, it may reasonably be considered that the bonus additions will be as great as the contingent additions, increasing with advanced ages. (See illustrations attached.) For instance, age 30, the full guaranteed contingent additions would be £50, while the (former results) bonus additions are quoted £57 15s 6d. At age 40, the contingent additions are still £50, but bonus additions £64 12s 6d. It will be observed that an applicant of 30 years of age will only be called upon to contribute £3 13s 1d per annum for 20 years. A maximum cost of £73 1s 8d buys £100 insurance for his widow and orphans, and provides a handsome donation to the fund for widows and orphans generally.

At the age of 40 the maximum possible cost per £100 would be £92 16s 8d. In the event of the applicant dying in any year after acceptance, the £100 to be paid in cash as contracted, the 50s for every annual premium paid to be placed to credit of general fund and all the unpaid premiums cancelled.

Guarantees.—The guarantees embodied in every policy include non-forfeiting conditions, loan options, etc., which operate after policy has been in force for three full years. The loan options could be used at the discretion of the board for the maintenance of the policy, such charges as might thus be incurred to form a debit against the policy itself and to be deducted at settlement.

Sources of Revenue for the Fund.—These would, therefore, be examination and agents' fees, contingent additions, bonuses, voluntary insurance assignments, insurances in cases of no surviving widow or orphans, lay subscriptions and bequests.

Liability.—No liability or responsibility whatever would be upon the association outside the care of the policies, agreements, and funds which come to their hands.

Expenses.—£100 per annum would cover salary of lady clerk and petty expenses.

Management.—The management of the scheme would be simplicity itself and almost free of cost.

Assistance.—The services of capable and interested persons would be available from the inception of the proposition free of cost to the fund for the purpose of putting same on a sound basis.

When would the fund be available.—It is suggested that no person should be placed on the fund for seven years, by which time it should be worth a considerable amount.

Small as the suggested provision is, it will be quite protected to those for whom it is intended, and will therefore be of greater value to them in the day of need than greater policies which may have lapsed through non-payments or be involved in unforeseen financial disaster.

LIMITED PAYMENT LIFE POLICY.—20-YEAR BONUS DISTRIBUTION WITH GUARANTEED INTERIM BONUS.

Premiums payable for 20 years only for an insurance of £100 payable at death, with participation in the profits. In the event of death during the first 20 years the amount of bonus payable in cash is guaranteed to be £2 10s for each annual premium paid. At the end of 20 years the guaranteed bonus is replaced by 20 years' accumulated dividends payable in cash, and thereafter dividends are added to the policy every year.

Age nearest Birthday.	Annual.	Semi-Annual.	Bonus added to the Policy	Cash Value.
21 ..	£3 2 3	£1 12 5	£57 15 6	£27 13 1
22 ..	3 3 3	1 12 11	57 7 6	27 19 4
23 ..	3 4 3	1 13 6	57 1 0	28 7 2
24 ..	3 5 5	1 14 0	56 15 0	28 15 10
25 ..	3 6 6	1 14 8	56 13 0	29 6 5
26 ..	3 7 9	1 15 2	56 13 0	29 17 5
27 ..	3 9 0	1 15 10	56 15 0	30 11 1
28 ..	3 10 4	1 16 7	56 15 0	31 3 2
29 ..	3 11 8	1 17 3	56 17 6	31 16 6
30 ..	3 13 1	1 18 0	57 2 0	32 13 1
31 ..	3 14 8	1 18 10	57 3 0	33 5 3
32 ..	3 16 3	1 19 8	57 7 0	34 0 3
33 ..	3 17 11	2 0 6	57 14 6	34 18 0
34 ..	3 19 8	2 1 5	58 3 0	35 16 8
35 ..	4 1 7	2 2 5	59 0 0	36 19 9
36 ..	4 3 7	2 3 5	59 17 0	38 4 6
37 ..	4 5 8	2 4 6	60 14 0	39 9 11
38 ..	4 8 0	2 5 9	61 16 0	40 19 1
39 ..	4 10 4	2 7 0	63 7 6	42 13 6
40 ..	4 12 10	2 8 3	64 12 6	44 6 7
41 ..	4 15 6	2 9 8	66 7 6	46 4 9
42 ..	4 18 5	2 11 2	68 2 6	48 5 11
43 ..	5 1 5	2 12 9	70 0 0	50 7 5
44 ..	5 4 8	2 14 5	72 5 0	52 15 8
45 ..	5 8 1	2 16 3	75 3 0	55 15 11

NOTE.—The above rates multiplied by two would give premiums for £200, with guaranteed bonus in event of death before 20 years of £5 for each annual premium paid. Multiplied by three would give premiums for £300, with guaranteed bonus in event of death before 20 years of £7 10s for each annual premium paid, and so on.

THE EPIDEMIC OF INFANTILE PARALYSIS.

(To the Editor of the Australasian Medical Gazette.)

SIR,—In reference to the recent epidemic of infantile paralysis which visited New South Wales, and apparently South Australia as well, a few remarks may not be out of place. I attended in all eight cases in this town and the adjoining country districts from the end of December, 1903, to the beginning of March, 1904, while the last of the series came under observation about the middle of May. Five of the patients were attacked between February 12th and February 26th. The incidence of the disease fell equally upon the two sexes, while the ages varied between thirteen months and five years.

The early symptoms consisted of thirst, feverishness with sharp elevation of temperature, peevishness, restlessness, twitchings, occasionallydelirium, wakefulness, headache, tenderness on handling or actual pain in the muscles, furred tongue, vomiting (sometimes urgent in its severity, or again altogether absent), and epigastric pain. The bowels varied, being sometimes regular, at others constipated or again loose, with diarrhœa. In some, however, there were no premonitory symptoms whatever, paresis of a limb being the first indication of anything amiss. In one case only did a rash develop. This was described as a pink, blotchy eruption over the body, which had subsided, leaving brown stains, by the time the child came under observation (the third day). The stains soon disappeared.

The muscular paralysis supervened sometimes on the first day or at the latest, in my cases, on the fifth day. The lower limbs were the severest sufferers. Sometimes all four limbs were involved, but the upper limbs were never involved alone. The spinal muscles were affected in one case, and in another the muscles of the back of the neck. As Dr. Wade remarks in your issue of July 20th, the flexors were never implicated alone. Intense cramps, pain and tenderness in the affected muscles and tendons sometimes prevented sleep. One child could not move his lower limbs, sit up or turn in bed. This child had his spinal muscles involved and Kernig's sign was seemingly, but I think not actually, present. The facial muscles did not suffer in any case.

In addition to the paresis or paralysis, when the disease was fully developed there was frequently loss of appetite, furred tongue, great restlessness, sometimes constipation, or again almost complete regularity of the bowels. The temperature was generally normal or occasionally slightly elevated in the evening, being frequently only 97° F. by the morning's register. The pulse, however, was often accelerated; in one case—a boy of three—it varied between 80 and 128. Retention of urine was a frequent complication, necessitating the use of the catheter. Frederick Taylor, by the way, in his "Manual of the Practice of Medicine," remarks that "the bladder and rectum are always unaffected." One patient developed broncho-pneumonia on the 28th day, when his limbs were beginning to recover, and died three days later.

Four cases recovered absolutely. One, as abovementioned, died. Another, in which the left leg, at first paretic, subsequently became completely paralysed, passed out of observation; but I heard incidentally that he was improving. Another when last seen, 14 weeks after the attack, could walk, somewhat unsteadily and with manifest weakness of the spinal muscles, but was still improving. The other one (in which the two legs were attacked) recovered the use of the right leg, but the left leg, 17 weeks after the onset of illness, was cold, shrunken, and carried awkwardly, with the foot in a condition of *talipes valgus*, improvement being apparently at a standstill.

As regards treatment, following Frederick Taylor and Tubby, I administered ergot in the earliest stages without, I must admit, expecting any beneficial results. Certainly I could not detect any improvement arising therefrom. It is interesting to note that Mr. Tubby, at the meeting of the South-Eastern Branch (Sevenoaks) of the B.M.A. in May of this year, regarded the cause of infantile paralysis as a toxin manufactured in the alimentary canal.—I am, etc.,

JOHN MACPHERSON, M.B., Ch.M., etc.

Young, N.S.W., July 26th, 1904.

OBITUARY.

W. H. GOLDIE, M.D. (Edin.), Auckland, New Zealand.

We regret to record the death of Dr. W. H. Goldie, of Auckland, which occurred at Colombo, in Ceylon, on June 15th last. He was a native of Auckland, and was educated at the Auckland Grammar School. He then proceeded to the Sydney University, and from there he went to Edinburgh, where he completed his M.B., C.M. course in 1896. He had a distinguished course in Edinburgh, gaining several medals, and also a bursary in obstetrics and gynæcology. He returned to practice in Auckland, and was widely known and respected there. He had the misfortune to be a passenger in the ill-fated steamer "Elingamite" when she was wrecked on the Three Kings, and he suffered much from exposure on these islands after the wreck. He never seemed to recover from the effects of this accident, and shortly afterwards began to suffer from symptoms of tuberculosis of the lungs and intestine. He left Auckland, intending to take a trip to England, in the early part of this year. He came to Sydney, and was advised by his friends here to abandon his idea of going to England and to return to New Zealand. However, after a stay in Sydney, during which time he was suffering much from intestinal disease, he proceeded on his voyage, and, unfortunately, succumbed at Colombo, as we have already stated. He was unmarried, but has left a wide circle of friends in Auckland.

We regret to record the death, at Samarai, New Guinea, of J. Taylor Hancock, L.R.C.P., L.R.C.S. (Edin.), L.M.L.F.P.S. (Glas.), 1895, one of the medical officers of the New Guinea Government. Dr. Hancock only arrived from England about 18 months ago.

The Chambers of Manufactures and the Public Health.

THE first conference of the Federal Council of Chambers of Manufactures of the Commonwealth of Australia held its sittings in the Chamber of Commerce room in Brisbane in the early part of this month. According to a report in the *Brisbane Courier* the conference took into consideration some important questions affecting the Public Health. A resolution bearing upon the sale and use of Poisons was passed as follows:—"This council has taken into grave consideration the wholesale and continuous destruction of human life—infant and maternal, adolescent and adult—by deleterious and poisonous drugs sold under deceptive names and secret formulæ.

"The report of the New South Wales Royal Commission upon infantile mortality, in its report dated March 3rd of this year, sets forth some of the evidence in these words:—'It is usual for proprietary drugs to be advertised and sold under deceptive names. Generally the name of a harmless and even beneficial natural product —such as Irish moss, linseed, cherries, sarsaparilla, aniseed, black currants, horehound—is used to disguise poisons, more or less virulent—opium, nux vomica, colchicum, ergot of rye, and their deadly concentrations alone or together with chloroform, aconite, various salts of arsenic, mercury, bromides of sodium and potassium. The law provides no check restraining any person, company or syndicate from preparing and packing these articles, or any or all of them, with other equally destructive, and advertising them as proved cures for all the ills of mankind, and more particularly of mothers and children, at any price they may choose, whilst giving a totally false, lying and deceptive label. Moreover, the state of the law is such that the Supreme Court affords protection to labels which are a deliberate deception and fraud upon the public. A label containing false statements calculated to deceive is a better protection in law to the person issuing it than if the statements were true, and any imitator would be more easily defeated.' This council places upon record its unanimous opinion that to continue such a state of affairs is to condone crime in its worst and most destructive form. We cannot ignore the frightful injury to health, nor the sum of anguish which must affect the parents and relations of those whose lives are thus untimely ended, nor the consequences to this Commonwealth, which needs so urgently the preservation of its citizens. Further, this council respectfully recommends to the earnest and immediate attention of the several Legislatures the recommendations of the Royal Commission aforesaid, and particularly sub-clause No. 2 of Clause No. 155, which says:—'(1) That the Act be amended so as to apply to the sale, distribution, gift, or disposal of poisons, and also of drugs reputed to be abortifacient. 2. That the Act be amended so as to prohibit the sale of patent medicines, proprietary medicines, and secret remedies, whether they contain poisons or not, and of photographic materials which contain poison, if accurate formulæ of such articles be not printed or written plainly on the bottle, case, box, or wrapper immediately containing them, together with the name of the vendor.'"

At the meeting on August 4th, Dr. Burnett Ham, Health Commissioner for Queensland, read a lengthy and important paper on the "Scientific Preparation and Preservation of Foods."

PRACTICES FOR SALE.

N.S.W.: Genuine and attractive Country Prac. in a fine district, easy access by rail from Sydney. Cash take, £700. Price, £300. Held by vendor 18 years.

N.S.W.: Unopp. Country Prac., large dis. free from drought; prosperous locality. £500 yearly saved from prac. The Furn. of 12 rooms, horses, buggy, drags, harness, cow. Everything £400, cash or terms.

N.S.W.: Prac. in large southern town in wealthy district. Appts. £200; cash take over £600. Est. 8 years. Would suit R.C. purchaser.

N.S.W.: Unopp. Prac. in advancing and prosperous dis., southern line. Farmers all doing well. Cash take now £500, which an energetic man could increase. Prompt buyer, £60.

TAS.: Old est. Prac., city of Launceston. Appts. £300; cash take, £800. Price, £200. Vendor has nice house in centre of town, which is also for sale.

MR F. W. LOXTON,
16 O'Connell-street, Sydney.—[ADVT.]

The Health of Sydney.

ABSTRACT OF REPORT OF THE OFFICER OF HEALTH, DR. W. G. ARMSTRONG, FOR THE YEAR 1903.

THE mean population of the metropolis for the year 1903, as estimated for the purposes of this report, was 503,930.

The births during 1903 numbered 12,749, or 253 less than in the previous year. The birth rate for the year was 25.29 per 1000 of the estimated mean population. Illegitimate births numbered 1278, or rather over 10 per cent. of the total births.

The deaths of the year numbered 5714, giving an annual death rate of 11.14 per 1000 of the estimated mean population, or a lower death rate than has yet been recorded in the metropolis in any year. In the estimation of the above number and death rate, a correction has been made for deaths in general hospitals in Sydney—that is to say, persons who died in Sydney hospitals, but resided outside the metropolis, have not been included, but their deaths have been referred back to the districts in which they resided before admission for treatment into a hospital.

INFECTIOUS DISEASES.—*Scarlet fever* was more prevalent and more fatal in Sydney than it has been in any year since notification became established. But the case fatality was very much lower than in the year 1902. The number of notified cases attained its maximum in May, and thereafter fell rapidly week by week until the end of the year, by which time the epidemic manifestation, which began to appear in the second quarter of 1902, had come to an end.

In general terms it may be said that scarlet fever appears to have been spread during 1903 almost entirely by direct infection by individuals suffering or convalescent from the disorder. There was no evidence tending to incriminate milk supplies in any part of the metropolis. It was not found necessary to close any schools during the year.

The mortailty rate per 1000 living was equal to 0.09, and is the highest recorded since 1894. The highest death rate was in Drummoyne (0.38 per 1000). In 21 of the sub-districts of the metropolis there were no deaths from scarlet fever. 1.65 per cent. of all cases of scarlet fever ended fatally. The fatality was greatest in the first year of life, and in later years diminished rapidly. Six attacks in adults proved fatal.

Diphtheria.—More attacks of diphtheria were notified than in any previous year, a fact which is to be regarded as another instance of the frequently-repeated observation that when scarlet fever is unusually prevalent, diphtheria will also exhibit an increased incidence. The number of notified cases was 690, corresponding to an incidence rate on the estimated mean population of 1.37 per 1000; 73 deaths were registered from diphtheria, equivalent to an annual mortality rate of 0.14 per 1000 living. The case fatality equalled 10.60 per cent. of all notified cases, and was slightly higher than in 1902 (9.41 per cent.).

Typhoid Fever.—The notified attacks of typhoid fever during the year were 833, which on the estimated mean population of the year yielded an attack rate of 1.66 per 1000 living. The number of notified attacks was more than 200 greater than in 1902, and the increase was not confined to any particular district. In Balmain the disease was particularly prevalent; no less than 150 cases occurred there in a population of 30,000, giving an attack rate of 4.84 per 1000 living. Eighty-one deaths were registered from typhoid fever—a mortality rate of 0.16 per 1000. The fatality for the year was 9.72 per cent. of notified cases, and scarcely varied at all from that experienced in the two preceding years.

Bubonic Plague.—Though the year 1903 was marked in Sydney by a third invasion of plague, only two cases occurred among human beings, neither of which resulted fatally. The circumstances accompanyng the third invasion were again strongly indicative of introduction into the port from oversea, and did not suggest recrudescence of a latent disorder. On May 12th, rats were reported by a firm of produce agents trading in Sussex-street to be dying in unusual numbers upon their business premises. From May 12th until July 15th rats and mice were found along the Darling Harbour frontages or its near neighbourhood, which were affected by or had died of plague. On June 22nd the first case occurred in a lad aged 16, employed at a printing establishment in Pitt-street. No very intimate connection could be made out between the patient and any area infested by plague rats. The second case occurred in a young man employed in a tinsmith's shop in Sussex-street, in a locality from which many plague rats had been obtained. He was taken ill on July 3rd. Both of these patients subsequently recovered after severe attacks. No other cases were known to have occurred in human beings, and after July 15th no more plague-infected rats or mice were discovered in Sydney. The total number of rats and mice trapped during the year by the combined staffs of the Health Department and City Council was 32,910, all of which were examined in the bacteriological laboratory of the Department of Public Health, and of which number 61 were found to be plague infected. In addition to the above, 69,286 carcases were brought by the public to the Government incinerator, as a result of the capitation fee which was paid by the Government.

Tuberculosis.—The total number of deaths from the various manifestations of tubercular disease in the metropolis during 1903 was 599. This figure represents over 10 per cent. of the deaths registered from all causes, and is equal to a death rate of 1.19 per 1000 of the estimated mean population. 483 of these deaths were caused by phthisis or tuberculosis of the lungs, 56 by tubercular meningitis, and 60 by other forms of tuberculosis. The death rate from phthisis alone was 0.96 per 1000.

The inquiry into the circumstances surrounding deaths from phthisis in the metropolis has been continued, the number of deaths investigated being 409. Inquiry has been made into the existence of possible sources of infection from other persons, into the sanitary conditions of the dwellings occupied by such persons, the nature of their occupations, and the locality in which the disease was believed to have been contracted. The deaths investigated included those of 212 males and 197 females. The ages at death ranged from 1 year to 79. The information gathered under the head of locality in which the disease was contracted indicated that an immense preponderance of the fatal cases of consumption in Sydney contract their illness here, and that the cases of imported phthisis bear a very small proportion to the total. Of the 409 cases investigated, 352, or 86 per cent., first became ill while living in Sydney, and of this number, 119, or 29 per cent. of the total, were born and lived all their lives in Sydney. Of the 57 persons who contracted phthisis outside Sydney, 26 became ill while residing in other parts of New South Wales, 14 while living in Australasia outside New South Wales, 9 in the British Isles, 3 while at sea, and in 5 instances this information could not be obtained. Of the possible sources of infection brought to light by the inquiry, by far the most commonly apparent was the association of the patient at some time antecedent to the first unmistakeable manifestations of his illness with a consumptive relative. In 143 instances, or 35 per cent. of all the cases investigated, there was evidence of such an association having taken place, and in 94 of such cases the patient and his consumptive relative or relatives had lived in the same house.

With a view to checking the ravages of phthisis, Dr. Armstrong advocates the notification of consumption as a measure greatly to be desired. It is already in force in Norway, in the city of Sheffield (England), in some American cities, and in South Australia, where it is having, according to Dr. Borthwick, the Medical Officer of Health for Adelaide, very happy results. Local statistics examplify very clearly the great results which may be achieved by even partial measures directed against the spread of consumption. They are furnished by the death rates from phthisis of the city of Sydney and its suburbs during the past three years. For several years before 1901 the death rates from phthisis, both in the city and suburbs, had been nearly stationary, with the death rate of the city ranging at from 30 to 50 per cent. above that in the suburbs. In 1901, the City Council began to enforce reforms in the general sanitation of dwellings within the city, which are of a nature known to be hostile to consumption. Improved ventilation of dwelling-rooms, especially in the poorer class of houses, and measures for remedying dampness of habitation, were insisted on. Measures directed more immediately against consumption were the disinfection by the Council of dwellings in which deaths from phthisis had occurred, and the enactment of a by-law prohibiting expectoration upon the footways of the streets. While the phthisical death rate in the suburbs remained stationary during the period, that of the city fell 28 per cent.—a very striking change which can only be ascribed to the adoption of the measures referred to.

The New South Wales Railway Commissioners during the year 1903 acceded to a request of the City Council, and made a by-law prohibiting expectoration both on the tramways and the railways. The steam ferry companies moved in the same direction by posting notices on conspicuous places in those parts of their ferry boats used by smokers requesting the public not to spit. As a result of this action, a marked improvement was brought about, both in the tramcars and the ferry boat.

Infantile Mortality.—The deaths of children under one year of age in the metropolis during 1903 numbered 1478, being 25.9 per cent. of the total deaths at all ages, and corresponding to an infantile mortality rate of 116 per 1000 births. The group of diarrhœal diseases caused 40 per cent. of all infantile deaths during the year.

As a step towards the reduction of the mortality from infantile diarrhœa, the Health Committee of the City Council, on December 1st, 1903, agreed to print a circular in simple language, setting forth the dangers of infantile diarrhœa, and giving some plain instructions as to the feeding of young children. This circular was distributed through the post to all householders in poor and thickly-populated neighbourhoods in the city of Sydney in which a birth had been registered during the six months prior to the date of its issue. Subsequently, its distribution was continued from day to day as fresh births were registered, the officials of the Registrar General's Department furnishing the necessary information. It is hoped that this proceeding will have some effect in directing the attention of parents to this highly important matter.

Dairies.—The number of registered dairies in the municipalities of the metropolitan combined district during 1903 was 399. 156 dairies were on inspection classed as good, according to their general condition; 217 were fair, and 26 were described as bad. These figures show very little change on those recorded in 1902. The dairies classed as "bad" diminished from 35 to 26, and the diminution was nearly all due to closure of dairies and not to translation of the inferior establishments into a higher class by the carrying out of improvements.

Infectious Diseases on Dairy Premises.—Six attacks of scarlet fever, four of diphtheria, and eight of typhoid fever were notified during the year as having occurred on dairy premises or those occupied by milk vendors. In every case appropriate measures were enforced (immediate removal of patient and disinfection of premises or closure of the dairy) to prevent the spread of infection by means of the milk, and there was no reason to believe that infection was subsequently so spread in any of the cases enumerated.

Adulteration of Food.—Thirteen municipalities took action of some kind during the year in the direction of the suppression of adulteration of food. The number of samples purchased and analysed was 761. Milk supplies analysed numbered 550, and of these 158 were adulterated. This was a marked improvement over the results of 1902, in which year 67 per cent. of the samples of milk taken for analysis were found to be adulterated. The adulteration of milk in Sydney is generally met with in three forms, the simple addition of water to the milk, or the abstraction of a portion of the fat, or an addition to the milk of some chemical preservative. The preservatives in use in Sydney are only boracic acid, borax, and formalin. Less than 2 per cent. of the samples of milk analysed in Sydney during 1903 contained preservatives. If the above figures be compared with those representing the extent of adulteration observed in previous years, it will be noticed that a considerable improvement has taken place, not only as regards the use of preservatives, but also in regard of the adulteration generally of milk. While 63 per cent. of the samples of milk analysed in 1901 were found to be adulterated, only 28 per cent. of the samples analysed in 1903 were adulterated, and that adulteration by preservatives fell from 41 per cent. in the former year to less than 2 per cent. in the latter.

During years prior to 1903, and during the early months of 1903, all prosecutions in Sydney for selling milk containing preservatives were based on section 88 of the Public Health Act, the vendor being charged with selling to the prejudice of the purchaser, a food not of the nature, substance, or quality demanded. On March 20th, 1903, regulations were gazetted by the Governor-in-Council, on the advice of the Board of Health, limiting the use of preservatives or antiseptics in certain specified foods. The regulations prohibited the use of any such antiseptic in milk (including condensed and concentrated), and table cream, in quantities greater than one one-thousandth of a grain per pint or per pound. In butter, 35 grains of boric acid per pound were permitted. The regulations came into force 90 days after being gazetted—that is, on June 18th. Thereafter prosecutions for the sale of milk containing preservatives were conducted by virtue of the authority of the regulations.

New By-laws.—During the year, mainly at the instigation of the State Department of Public Health, a considerable advance in internal legistation was effected by a number of suburban boroughs in respect of matters concerning the public health. In view of the essential part played in the establishment and in the dissemination of plague by rats, and in consideration of the fact that certain conditions of structure or maintenance have been ascertained by experience to render premises peculiarly suitable for the harbourage and multiplication of rats, the State Department of Public Health, in the earlier part of the year, drew up a code of model by-laws for the guidance of borough councils. Previously to 1903 the by-laws in the code had all, in substance, been enacted by the Municipal Council of the city of Sydney.

House to House Inspection.—A considerable amount of useful work has been achieved in several districts in the direction of the systematic inspection of dwellings, and remedying defective sanitary conditions when such were found to exist. In Redfern a rather extensive insanitary area has been very largely remodelled. It contained 305 dwellings, which, for the most part, consisted of weatherboard cottages of the smaller class, with a small sprinkling of more modern brick houses. All the wooden buildings were very old. Many were absolutely ruinous and fit for nothing but demolition, and scarcely one was free from rotten and crumbling timbers. With very few exceptions, the water-closets on the area were in a most defective state, both as regards fittings and connections with the sewers. Other sanitary defects were numerous. Measures were immediately taken by the local authority of Redfern to remedy the condition of the area. The improvements effected reflect considerable credit on the energy of the sanitary inspector of the borough, who was chiefly instrumental in serving and enforcing the notices of his Council.

PUBLIC HEALTH.

Health of the Metropolis.—Dr. W. G. Armstrong, the Medical Officer of Health, reports the total number of deaths registered as having occurred during July was 501. This figure, however, includes deaths of residents on the shipping and islands of the harbour and patients in the Gladesville and Callan Park Hospitals for the Insane, as well as non-residents of the metropolis who died in metropolitan general hospitals. Excluding all such deaths, the number proper to the metropolitan municipalities was 445, or 130 less than the figure for June. The annual death rate corresponding to this number is 10.10 per 1000 of the estimated mean population, a rate which after correction for the metropolitan proportion of deaths in benevolent and lunatic asylums throughout the State becomes 10.88 per 1000. The principal infectious diseases caused 22 deaths, of which three were due to scarlet fever, 14 to influenza, 3 to diphtheria, and 2 to typhoid fever. Diarrhœal diseases, including diarrhœa, dysentery, gastro-enteric catarrh and enteritis, caused 22 deaths, of which only 10 were infantile. Phthisis caused an unusually large number of deaths; 54 were attributed to this cause, or a higher figure than has been experienced during any month for the past five years. The mortality from respiratory diseases was rather below the average for the month of July during recent years. Pneumonia caused 39 deaths, bronchitis 31 deaths, and all other respiratory diseases 5 deaths. Infantile mortality was extremely low even for July, which is always a favourable month in this respect; 77 deaths of children under one year of age were registered, corresponding to an infantile mortality rate of 71 per 1000 births. The principal causes of infantile deaths were: prematurity, 20; developmental diseases, 20; enteritis, 9; respiratory diseases, 12. The numbers of persons attacked by the notifiable infectious diseases were as follows: Scarlet fever, 98; diphtheria, 74; typhoid fever, 24. The two former were rather above the quinquennial averages for July; typhoid fever was considerably below the same average.

The Bubonic Plague.—Two plague-infected rats were discovered in the city on July 20th, one at Miller's Point and the other in the neighbourhood of Sussex-street. A supplement was issued in the *Government Gazette* notifying that any persons finding dead rats on their premises must report the fact immediately to the nearest police office. This notification was considered necessary in view of the fact that the presence of dead rats may indicate the existence of plague amongst them. Failure to comply with the regulation referred to will render offenders liable to prosecution. A case of plague was reported to the Board of Health on August 3rd. The sufferer was a shipping clerk, 40 years of age, and employed in an establishment in Clarence-street. He resided at Woollahra. His medical attendant reported the case to the Board of Health, and Dr. Millard, assistant medical officer, confirmed the diagnosis that it was one of plague. The patient was removed to the Coast Hospital, but died next morning. This makes the tenth case during the present outbreak. Three out of the ten patients have died from the infection.

Sanitary Condition of the Metropolitan Suburbs.—Dr. Stokes, the assistant medical officer of health, in a recent report to the Leichhardt Council, drew attention to the insanitary condition of certain premises in the district, and as he considered it dangerous to health, he advised that proceedings should be taken with a view of causing the owner in question to abate the nuisance. In connection with butchers' shops and fodder stores generally, the officer recommended that the local authority should cause to be made an exhaustive inspection of all such premises in the district with a view to ascertaining their structural condition, and further to take such proceedings under the recently-adopted code of model by-laws for the prevention of the spread of plague by rats as might be shown to be necessary by such examination.

Victoria.

Diphtheria in Schools.—The risks of contracting diphtheria to which school children are exposed were commented on by Dr. Gresswell some time back, and Dr. Norris has dealt with the subject in a report which was received by the Board of Health last month. The Ascot Vale State school was closed on account of an outbreak of the disease, and a little time after it was reopened diphtheria bacilli were found in the throats of two of the children, and other pathogenic organisms in the throats of five others. These facts were vouched for by Dr. Bull as a result of tests made at the bacteriological laboratory of the University, and the officer of the board point to the necessity of great care being exercised before children are allowed to resume attendance at schools in which diphtheria has occurred.

Milk Supervision Bill.—According to the Melbourne *Age* the progress of the Milk Supervision Bill is being watched with anxiety by its promoters and by those through whose hands it has passed. It was originally drafted by the Board of Health, which received the assistance of an official municipal conference. It has also been considered by the Wholesale Milk Producers' Association and by other kindred bodies. All the amendments proposed by these expert associations, together with the more important suggestions of the municipal conference, were passed on by the Board of Health for the consideration of a sub-committee, with instructions to approve of as many as possible. The only essential difference of opinion between the board and the conference was with regard to the severity of the inspections. The board considered that it would be advisable to begin with easy examinations, and insist merely on the registration of dairies and milk-producing farms. The conference, however, thought that licensing, carrying with it far more stringent conditions and inspections, should be the unvarying rule. As the municipalities will have to administer the bill, the members of the board eventually consented to the more drastic provisions. When the board presented the bill to the Minister for Health, Mr. Cameron, he was not as eager for its enactment as they had hoped, and said he would have preferred a general food adulteration bill, with milk figuring merely as one of many foodstuffs dealt with. The board pointed out that milk was drunk by almost every person in the State, and that it was essential that the supply be pure, as it was an easy purveyor of germs. The bill is the outcome of the experience of all the State's experts, and the public will look for its early consideration by Parliament.

Queensland.

Bubonic Plague.—At Brisbane during the week ending August 13th, two infected rats were discovered, and the total number of rodents destroyed was 286. At Ipswich during the week ending August 4th, one infected rat was discovered, and the total number of rodents destroyed was 109. The last case of plague in man in this State occurred on June 12th last. Two fatal cases of bubonic plague occurred in Brisbane on August 15th, but were apparently only discovered post mortem.

West Australia.

Sanitation of the Mines.—At the annual social ot the Western Australian branch of the Amalgamated Mines Association, Dr. Black, member of the Mining and Mines Ventilation Commission, said he had come to the conclusion, reluctantly as he had been forced to it, that the ignorance of sanitation on the part of those concerned was simply colossal. As far as he had gone and examined the mines, he could only say that sanitation, in the majority of them, was simply abominable. To that subject and the effect on miners, also as to how diseases in miners arising from these conditions might best be prevented, he had particularly to direct his attention. He trusted that miners would give him their assistance in obtaining information, otherwise he would not be able to do much practical good.

Smallpox.—Three fresh cases of smallpox have occurred at Broome, two of the victims being members of the crew of the lugger on which the first outbreak took place, and the other a member of the crew of the fleet to which the lugger belonged. Two of the patients are coloured men.

Bubonic Plague.—A case of plague was reported from Fremantle on July 29th. The patient was a fireman on the coasting steamer "Meeinderry," running from Fremantle to Geraldton. The health officer states he is satisfied the disease was contracted at Fremantle.

Tasmania.

Vital Statistics.—During the month of June there were 49 deaths registered in the registration district of Hobart, but two of these were persons not usually resident in the district. In the city proper there were 27 deaths, viz., 10 males and 17 females, giving a death rate of 13.20 per thousand per annum. The principal causes of death were: Typhoid, 2; phthisis, 2; cancer, 1; heart disease, 6; apoplexy, 2; pneumonia, 3; old age, 2; and the remainder were of a general character. Ages of death: Three were under 1 year of age; one between 1 and 5 years; 17 between 5 and 65 years; and 6 over 65 years. The total number of births registered in the district was 101, viz., 53 males and 48 females. In the city proper 71, viz., 40 males and 31 females. There were four cases of scarlet fever and three cases of typhoid reported during the month of June. The Officer of Health reported that the general inspection of the city was commenced on May 24th last, and up to July 19, 2235 premises were inspected, 2009 being reported as in a clean state. The work of the inspectors has been somewhat retarded owing to the wet weather experienced during the early part of inspection. A number of notices have been served to remedy sanitary defects, and in nearly every case have been readily complied with.

South Australia.

Consumptives' Home.—The trustees of the Angas Estate have written as follows to the Premier (Hon. J. G. Jenkins) respecting the conversion of Hope Lodge into a Consumptives' Home:—"Following our prior correspondence on this subject, I have the honour to inform you that upon the day on which I received your letter of acceptance of the late Mr. John Howard Angas's offer to make the property known as the Belair Inebriates' Retreat available for the purpose of a home for consumptive patients, he became so seriously ill as to preclude consideration by him of the details connected with the carrying of the proposed gift into effect; and, although all necessary documents had been prepared by me awaiting his return to health, his continued illness suspended all further action in the matter on his part, and, unfortunately, his intended gift remained incomplete at the time of his lamented death. The trustees of Mr. Angas's estate now desire me to say that, having given the whole matter their most careful consideration, and having also obtained legal advice, they find that, having regard to the fiduciary position they occupy, they have no power to give effect to the late Mr. Angas's intentions. The trustees also desire me to thank you for your courtesy in awaiting their considered decision in the matter." For some time Mr. C. H. Goode has been interesting himself in the completion of the Kalyra Home for Consumptives at Belair, which, with the late additions, now accommodates 50 patients. Mr. Goode had a sum of £200 left over from the building of the last wing, and a promise of another £50. A gentleman quite unknown to him called upon him on Monday and made enquiries regarding Kalyra. Mr. Goode said that £500 was wanted to complete the building. The gentleman then handed Mr. Goode a cheque for £500.

The Birth Rate in India.—An Indian Blue Book published recently shows that in the year 1902-3 the birth rate over the whole of the country was 39.4 per 1000, one and a half times that of England and Wales, rising in one province to the enormous figure of 56.9, and nowhere falling below 23.9.

HOSPITAL INTELLIGENCE.

Melbourne Hospital. — The fifty-seventh annual meeting of the subscribers of the Melbourne Hospital was held last month. The balance-sheet presented by the committee of management showed that a marked improvement had taken place in the financial condition of the hospital, for while the deficit on the maintenance account stood at £7216 2s 7d in November, 1903, it was reduced to £345 3s 8d by June 30th, 1904. As no further additions or improvements to the existing buildings will be permitted by the Board of Health except such as are included in a general scheme of reconstruction, and as increased accommodation is urgently needed, the committee in its report recommends that an appeal be made to the Government and people of Victoria for funds that would enable this reconstruction to be carried out on a scale worthy of the great general hospital of the State. At the close of the annual meeting a special meeting of governors was held to confirm two new by-laws respecting life governorships. Mr. F. R. Godfrey proposed the adoption of the first by-law, which was as follows:—The employees of any public or corporate body, or company, or business firm, and the members of any friendly society or club, who shall pay to the hospital, in one year in one sum, collections to the amount of £1, shall be entitled to nominate an annual governor for each £1 so contributed; and the employees of any public or corporate body, or company, or business firm, and the members of any friendly societies or club, who shall pay to the hospital in one year in one sum, collections to the amount of £20, shall be entitled to nominate a life governor for each sum of £20 so contributed." Dr. W. Moore and others opposed the by-law, which was adopted by 19 votes to 17. A ballot was demanded, however, and will be taken on a day to be notified later on. The second by-law adopted provided that—" In no case shall any person be a life governor unless he or she shall have made application to the committee of management for enrolment as such within one year from the date of the payment in respect of which he or she is entitled to such privilege. The following gentlemen were elected on the committee of management:—Rev. Dr. L. D. Bevan, Mr. Wm. Burton, Mr. George Gibb, Mr. D. V. Hennessy, Dr. W. Moore, Mr. Jas. Nicholson.

Lady Bowen Hospital, Brisbane.—The annual report of this hospital states that although the number of patients treated has not been quite so large (404 as against 463 last year), some of the cases have been of a very serious character. Eleven adults and nine infants have died during the year. Since the publication of last report, this hospital has affiliated with the Australasian Trained Nurses' Association, and has thus become a recognised school for the training of midwifery nurses. During the year eight pupil nurses have passed the necessary examinations and received their certificates, whilst eight others are in course of training. Dr. Helen Shaw resigned during the year with the object of commencing private practice. She was succeeded by Dr. Calhoun, whose health, the committee regret to say, has since compelled him to resign and leave Brisbane. The committee are greatly indebted to the energetic workers of the Hospitals' Village Fair, this institution benefiting to the extent of £300. The committee thank the hon. medical staff, Drs. Brockway, Carvosso, F. Glynn Connolly, Hopkins, Wilton Love, and Sutton, for a continuance of their valuable services. The balance-sheet showed that the receipts totalled £2125 5s 9d. The chief items of expenditure were: Maintenance, £488 16s; wages, £328 14s; salaries, £176 3s; medicine, funerals, etc., £113 18s 3d; rates, £120 6s 1d; painting and repairs to building, £181 17s 3d; and sundries, £204 15s 8d.

Lady Lamington Hospital, Brisbane.—At the fourth annual meeting of the subscribers to this hospital held last month, the annual report showed that the need for the institution was increasingly manifested by the number of applications for admission, many of which had to be refused by reason of the limited accommodation. Dr. W. S. Byrne had been acting as *locum tenens* for Dr. Lilian Cooper. The number of patients in the institution on June 30th, 1903, was nine, and 121 had been since admitted, the average stay in the hospital being 23½ days. Anæsthetics were administered on 142 occasions, and 186 gynæcological operations were performed. Three patients died during the year. 981 visits had been paid by out-patients. Forty-five meetings of the committee had been held, with an average attendance of seven. Special reference was made to the new hospital, the foundation-stone of which was recently laid, and to the fête in September, in connection with which the liberality of Sir Samuel and Lady Griffith was gratefully remembered. The hon. treasurer presented the balance-sheet, which showed that the receipts for the year totalled £1946 4s 3d (subscriptions £331 11s 11d, garden fête £1009 9s 11d, patients' payments £228 15s 6d, Government subsidy £272 0s 8d, etc.). Disbursements amounted to £839 8s 4d (provisions £202 1s 2½d, surgical appliances and drugs £104 12s 9d, establishment £269 18s 4d, salaries and wages £216 7s 6d, etc.). The building fund was £4047 7s 7d, the fixed deposit £535, and the balance on hand £155 18s 3d.

Melbourne Eye and Ear Hospital.—A deputation representing the committee of the Eye and Ear Hospital recently waited on the Premier with regard to the extension of the building. Adjoining the institution there is a piece of land owned by the Metropolitan Board of Works, and used by the board as a storage yard. The deputation desired to secure this land, and proposed that in exchange for it the Government should hand over to the Metropolitan Board of Works a piece of Crown lands at South Melbourne, situated behind the Homœopathic Hospital, leased by the board, and also used by it as a storage yard. It was pointed out that the accommodation at the hospital was very inadequate. The out-patients' room was only large enough to accommodate 65, while there were from 100 to 150 out-patients to accommodate. The doctors also were crowded inside. It was therefore absolutely necessary that the premises should be extended, and this piece of land was the only one available in the vicinity for the purpose. The Premier, in reply, said with regard to the block at South Melbourne, the Government was at present getting a rental of £300 a year for it from the Metropolitan Board of Works. After a long conversation, he said he would have an interview with the chairman of the Metropolitan Board of Works. He would give careful consideration to the whole matter and would let the committee know the result as soon as possible.

Children's Hospital, Brisbane.—The annual meeting of the subscribers to this institution was held in Brisbane last month. The annual report stated that Dr. Lucy Gullett had resigned her position as resident medical officer; that Dr. Eleanor Bourne had been appointed to the position; that Dr. Lilian Cooper had been granted 12 months' leave of absence; and that Dr. Keir Scott was acting as her *locum tenens*. The medical report showed that deaths had numbered 84, and of these 22 died on the day of admission, and 11 within the first 48 hours. Eighty-eight cases of typhoid were admitted during the year, of which six died. Eighty-five cases of diphtheria were treated, and there were 11 deaths. There were 505 operations performed during the year. A summary of the year's work was as follows:—Remaining in hospital, July 1st, 1903, 83; admitted during the year, 965; readmissions, 12; readmissions under Rule 20a, 3; of these there had been cured, 829; relieved, 59; unrelieved, or at parents' risk, 33; died, 84; remaining in hospital, July 1st, 1904, 58; total, 1063. Out-patients' department: New cases, hospital, 3857; South Brisbane, 992; total, 4849; total attendance, hospital, 12,240; South Brisbane, 1730; total, 13,970. Sandgate Sanatorium: 132 children had been sent to Sandgate during the year. The statement of accounts showed receipts amounting to £4568 1s 6d, including £1934 3s 4d from subscriptions, donations, entertainments, collecting boxes, Hospital Aid Association, and schools, and £2194 12s 10d Government subsidy. The expenditure was stated at £4446 14s, of which wages were responsible for £1763 15s 5d, and maintenance £1013 8s 2d. There was a credit balance for the year of £77 0s 9d. The need of more ward accommodation was apparent every year. The diphtheria ward was quite unsuitable for the treatment of infectious diseases, and there was urgent need of an infants' ward. With the approaching summer months infants' diseases became more prevalent. The necessity for a larger water main was very pressing, as in the event of fire breaking out in any portion of the hospital, the present limited supply of water would prove to be seriously inadequate. The cost would probably be nearly £200. The health authorities had made an inspection of the drainage system, and reported the necessity of immediate alterations, this meaning an outlay of from £70 to £80.

Royal Prince Alfred Hospital, Sydney.—At the last monthly meeting of the board of directors the report on the work of the institution for the month of June showed the following: Patients admitted, 262; patients discharged—cured 182, relieved 46, unrelieved, 21; deaths, 25; average number of beds occupied, 224, the number occupied at the end of the month being 221. The number of operations performed was 193. It was resolved that the exisiting connections and sanitary fittings in the old part of the hospital should be renewed, these having been in use for some 23 or 24 years. A committee was appointed to inquire into the question of heating and lighting the new pavilions and the hospital generally, and as to the question of providing increased boiler power for the hospital.

Carrington Hospital, N.S.W.—At the meeting of the directors of the Carrington Convalescent Hospital held last month, Mr. Gotthelf reported having, together with Messrs. H. S. Thompson and H. C. Kent, visited the hospital on June 23rd, when a general inspection was made of the building and the Masonic cottage. Reports from both Messrs. Thompson and Kent, bearing on the inspection, were read, and it was resolved to carry out their suggestions and call for tenders for the work. An exhaustive report was also received from Mr. Kent on the proposed septic tank for the hospital. It was decided that the work also be carried out, and that Messrs. Kent and Budden be instructed to prepare specifications for the work. Dr. Purser reported the appointment of Miss Clara Hassall as senior sister in place of Miss Edith Miles, resigned. A satisfactory report on the general work of the hospital was received from the matron.

Newcastle Hospital, N.S.W.—The Government architect, Mr. Vernon, visited Newcastle and had a consultation with the president of the hospital, Mr. C. H. Hannell, in reference to the proposed additions to the institution. There were also present Mr. W. J. Milner, district engineer, Dr. Nickson, hon. medical staff, and Dr. Woolnough, medical superintendent. It was decided that the first work to be started should be the laundry, the estimated cost of which is £1600, tenders to be called at once. It was also decided to at once reticulate the entire building, including the nurses' quarters, with a hot water service, the estimated cost being about £500.

Sydney Hospital.—At the monthly meeting of the board of directors of the Sydney Hospital a cheque for £500 was received, being the amount allotted to the Sydney Hospital in terms of the will of the late Sir Daniel Cooper, Bart. A contract was signed for installing a system of "Grinnell" sprinklers on that side of the institution facing Parliament House, as a protection against the grave danger to which the institution would be exposed should a fire occur at Parliament House.

Sydney Royal Alexandra Hospital for Children.—At the monthly meeting of the board of management, the house committee's report was as follows:—General hospital, admitted 38, discharged 41, deaths 3, remaining 44; diphtheria ward, admitted 19, discharged 15, deaths 3, remaining 6; attendances of out-patients, 2277. The hon. treasurer's report showed a debit balance of £918 19s 5d. A vote of thanks was passed to the Misses Goldschmidt for a donation of £60, being the proceeds of a dance organised by them in aid of the cot fund. It was resolved that an X-ray apparatus be provided for the hospital at a cost not exceeding £60.

Benevolent Society of N.S.W.—At the monthly meeting of the board of directers a return showed the state of the hospital for infants and asylum for destitute women and children. There were admitted during June 36 women and 31 children, together with 58 women and 75 children remaining in at the end of the previous month; 27 women and 43 children had been discharged, leaving in the institution at the end of June 67 women and 83 children; total, 150. At the Hospital for Women, Paddington, there had been admitted during June 38 women, while there remained at the end of the previous month 34 women and 12 children. Twenty-six children had been born, 44 women and 30 children had been discharged from the hospital, while there remained in at the end of June 38 women and eight children; total, 46. The ladies' committee of the Hospital for Women have resolved to hold a grand fête on behalf of the furnishing of the new Hospital for Women.

Women's Hospital, Melbourne.—The forty-seventh annual meeting of the subscribers to the Women's Hospital was held on August 11th. The report of the committee showed that there had been a large increase in the number of patients admitted to the infirmary department, the number being 552, as compared with 411 for the previous year. The admissions into the midwifery department were 1490, as against 1460 for the previous year, and 1120 infants were born, an increase of 25. There were 1121 out-patients, being an increase of 78. Notwithstanding all the efforts of the committee and staff, there were still 420 patients awaiting for admission into the infirmary department. The overdraft on the maintenance account was £1368 8s 8d, as compared with £93 9s 1d at the commencement of the previous financial year. The committee appealed to the public to furnish means to remove some of the old and inconvenient buildings, and put up modern ones. The total expenditure, including maintenance, administration, and extraordinary expenditure, was £7425 13s, and the total receipts fell short of this by £1368 8s 8d.

MEDICAL NOTES.

The Sydney Pathological Club.—The second meeting of the year was held at the Clinical Laboratory, Sydney Hospital, on Thursday, July 21st inst. Professor Welsh occupied the chair. Dr. Madden, Professor of Surgery at Cairo, gave an account of the life history and pathological condition produced by the Bilharzia hæmatobium. Professor Welsh and Dr. Jamieson presented a communication on deciduoma malignum, with macroscopical and microscopical specimens. Professor Welsh gave a demonstration on a possible factor in detachment of the retina. Dr. Robert Dick showed the following specimens:—(*a*) Sections of organs in a case of phosphorus poisoning; (*b*) hydatid cysts passed per urethram (male); (*c*) spleniculi and sections of spleen and liver in a case of malaria.

Clinical Afternoon at the Royal Alexandra Hospital for Sick Children.—The second clinical afternoon of the Royal Alexandra Hospital for Children, Sydney, was held on July 22nd at Valentine-lane. Dr. Money presided, and there were several visitors present. Dr. Littlejohn showed the following cases:—A case of hydrocephalus following basal meningitis; a case of obstetrical paralysis; a case of infantile paralysis of the left shoulder, raising the question of treatment by anastomosis; a case showing remarkable flexibility of the lower limbs. Dr. Wade showed a case of ichthyosis simplex. Dr. Macmaster also showed a case of ichthyosis simplex. Dr. Litchfield showed a case of infantile paralysis, exemplifying the gait where one lower limb was almost completely paralysed. Dr. Macmaster demonstrated the method adopted at the O.P. department of giving chloride of ethyl for general anæsthesia.

Convalescents' Aid Society.—At the eighteenth annual meeting of members of the council of the Melbourne Convalescents' Aid Society for Men, held on July 22nd, the council reported that during the year ended June 30th last the number of convalescents who entered the home during the 12 months was 413, or 50 more than the number admitted in the preceding year. The average daily attendance was 17.4, and the average stay per man was 15.6 days. The cost of maintenance was 12s 6¼d per week per head, as against 13s 9½d in 1902-1903. Subscriptions amounting to £154 0s 3d had been received during the period under review, being an increase of £17 7s 3d. The total outlay on account of maintenance was £508 0s 6d, being a decrease of £23 16s 7d on the previous 12 months.

Cost of Dr. Ramsay Smith Enquiry.—In the House of Assembly, South Australia, the Chief Secretary, in reply to Mr. Peake, said that in connection with the Ramsay Smith Enquiry Board the amount of Government expenses paid to date was £218. No amount had yet been paid to Dr. Ramsay Smith. His solicitor's costs had been rendered at £975, but on review before the Chief Justice this amount had been reduced to £420.

Hospice for the Dying, Sydney.—In the annual report of the Sacred Heart Hospice, Darlinghurst, the Sisters of Charity state that during the year the patients admitted numbered 367, which, with those in the institution at the commencement of the year, made a total of 392 under treatment. There were discharged relieved, 120; discharged unrelieved, 52; died, 192; and remaining under treatment at the close of the year, 28. The high death rate of 48.9 per cent. is ascribed to the fact that most of the patients were admitted in a dying condition, to spend the few remaining days of their life at the hospice. Many came with incurable diseases, some of whom were relieved and returned to their friends, only to return later to die.

Sydney Commonwealth Home.—At the annual meeting of the Commonwealth Home, held last month, the annual report showed that since the Home was established in 1900 it had met a long-felt want. Men and women declared by the doctors, after treatment in the public hospitals, to be incurable and crippled were the objects of the Home's attention; but with the limited means of accommodation at the disposal of the committee, they regretted that they could not do all that was required. At the beginning of this financial year there remained in the Home 15 inmates (nine males and six females), and four fresh cases were admitted. This left 15 inmates on June 30th. In addition to these inmates the committee gave outdoor relief to a number of deserving invalids, who, though living with friends, were in the very poorest circumstances. More commodious premises were urgently required. On December 1st, 1903, Lady Rawson handed to the president, the Right Hon. G. H. Reid, a purse of 60 sovereigns, the net result of a sale of work carried out by a committee of ladies on behalf of the home. The treasurer's balance-sheet showed that the revenue for the year was £779, and the expenditure £727.

Proposed Maternity Hospital for Hobart.—A deputation was recently introduced to the Premier (Hon. J. W. Evans) by the Mayor (Mr. Bennison) with reference to the Maternity Hospital it is proposed to erect in Hobart. The Mayor said the deputation requested a vote of £300 or £500 towards the funds which had been collected towards the establishment of the hospital, and also spoke of the necessity for such an institution in the city. The Premier stated that the movement had his personal sympathy. He would take an early opportunity of submitting the matter to his colleagues for consideration; but he was afraid that in the present state of their finances he could not hold out much hope of their request being granted.

One of the members of the Amateur Photographic Association of Victoria—Mr. A. G. Freyett, F.R.M.S.—delivered a lecture at the last monthly meeting upon Stereoscopic Diagrams, showing the anatomy of the arteries of the human body, illustrated by means of a Wheatstone stereoscope. The prints were exceptionally large. One print showed a hydatid lung in situ. The whole of the arteries of the human body, inclusive of the internal organs, were made very distinct, and could be clearly traced from their origin to their terminals. The infected specimens of the lung were of exceptional interest. The lecturer stated that all this work had been carried out at the Melbourne University.

PERSONAL ITEMS.

Dr. P. W. Menzies has resigned his position as public vaccinator for the districts of Bay of Islands and Ohaeawai, N.Z., and has commenced practice at Stratford, Taranaki.

Dr. Edmonds has resigned his position as public vaccinator for the district of Kawakawa, N.Z.

Dr. H. D. Eccles has resigned his appointment as public vaccinator for the district of Tauranga, N.Z.

Dr. H. L. Maitland, of Sydney, has been appointed to the Commission of the Peace.

Dr. Hugh L. Murray, of Melbourne, has been elected a Fellow of the Royal College of Physicians of Edinburgh.

Dr. J. A. D. Rome, late of Boulia, Queensland, has succeeded to Dr. H. C. Patrick's practice at Taree, N.S.W. Dr. Patrick is proceeding to Shanghai, China, with the idea of practising there.

Dr. Stuart Reid has relinquished practice in Auckland and leaves for England.

Dr. Simmons, of Masterton, N.Z., has bought Dr. Niccol's practice at Patea.

Dr. Crooke has succeeded to Dr. Douglas' practice at Woodville, N.Z.

Dr. Edmonds, late of Kawakawa, has commenced practice at Whakatane.

Dr. and Mrs. Dr. Kellar, of Auckland, have commenced practice in Whangarei.

Dr. W. E. Collins left Wellington by the "Corinthic" on the 23rd ult. for a trip to England.

Dr. F. Truby King, medical superintendent of Seacliff Asylum, having been granted a holiday on sick leave, left on a short visit to Japan last month. Dr. Crosey, of Sunnyside Asylum, Christchurch, is his *locum tenens* at Seacliff.

Dr. R. S. Reid, of Timaru, and well known in Dunedin and Milton, is about to take a trip to America.

Dr. D. Murray Ross, of Dunedin, has been appointed resident house physician at the St. Marylebone Hospital, London.

Dr. F. G. Baur is the medical adviser at the Medlow Hydropathic establishment lately erected by Mr. Mark Foy on the Blue Mountains, N.S.W.

Dr. R. Scott was re-elected president of the Ballarat Horticultural Society at the annual meeting last month.

There was a large gathering at the Masonic Hall, Bendigo, Victoria, on the 25th ult., when the new lodge, the Corono, No. 195, was consecrated by Bro. Dr. Balls-Headley, D.G.M.

Dr. Walsh has been elected chairman of the Town Board of Strahan, Tasmania.

Dr. A. E. B. Hine has resigned his position as a member of the Board of Advice for the School District of Nairne, South Australia.

Dr. Crabbe, of Chatswood, Sydney, has been granted three months' leave of absence from his municipal duties in consequence of illness.

Dr. Thomas Cherry has been elected to the Council of the Ormond College, Melbourne.

Dr. Albert Dunlop has been appointed to the Commission of the Peace for Ipswich, Queensland.

Amongst the passengers by the R.M.S. "China," which sailed from Sydney on August 6th for London, via ports, were Dr. Nicholas Senn, the well-known surgeon of America, who, after a tour of Australia, is returning via India, and Dr. and Mrs. Garde, of Melbourne.

Dr. Richard Arthur, of Mosman, Sydney, has been elected a member of the Legislative Assembly for the Middle Harbour Division of the State of New South Wales.

Dr. Madden, D.I. of the District Grand Lodge of Egypt and the Soudan (English Constitution), represented his Grand Lodge at the installation of the Grand Master of New South Wales in Sydney on July 21st last.

At the July meeting of the board of directors of the Royal Prince Alfred Hospital, the resignation was received of Miss E. L. Hunter, who has been acting as matron for the past six months. The following resolution was recorded:—"That the resignation of Miss Hunter from the nursing staff, of which she has been for some years the senior member, be accepted with regret. Miss Hunter has passed through all the various grades of the staff with credit to herself and benefit to the hospital, and after a period of service as matron's assistant, she has finally, for a period of six months, filled the position of acting matron. In the latter capacity she has shown great talent and administrative ability, and her decision to withdraw from active work for a time will inflict a serious loss upon the hospital."

Miss McGahey, late matron of the Royal Prince Alfred Hospital, Sydney, has opened a private hospital at Charlemount, Darlinghurst-road, Sydney.

Dr. A. W. Esler, late of Stanmore, Sydney, has purchased Dr. H. W. Bryant's practice at Williamstown, Victoria. Dr. Bryant has removed to 151 Collins-street, Melbourne, after practising for 18 years at Williamstown.

The eightieth birthday of Dr. J. E. Neild was celebrated on August 3rd by a dinner given in his honour at the Vienna Café, Melbourne. About 50 gentlemen, representing the medical, legal, and other professions, were present. Mr. R. E. Weigall, M.B., President of the British Medical Association, was in the chair. On his right were Dr. Neild, Mr. Candler (city coroner), and Dr. J. P. Ryan, and on his left the Chief Justice (Sir John Madden) and Dr. Balls-Headley. Apologies for absence were received from Sir Samuel Gillott, Sir Thomas Fitzgerald, Dr. Cresswell, and Mr. Robertson, M.R.C.S. The Chairman proposed the toast of "Our Guest." Sir John Madden, Dr. J. P. Ryan and Dr. Barrett also supported the toast, which was honoured with enthusiasm. Dr. Neild suitably replied.

At the last meeting of the Melbourne Hospital Committee a letter was received from Mr. B. Nathan, proprietor of the Ascot Vale racing course, stating that it was his intention to hold, on 25th inst., a race meeting on behalf of the hospital, and furthermore that a "Melbourne Hospital Benefit Meeting" should become an annual event at Ascot. The offer was received with thanks. A similar effort made by Mr. Nathan last year resulted in the sum of £150 being added to the hospital funds.

"CHARLEMOUNT" (Sydney) PRIVATE HOSPITAL, 24 Darlinghurst-road (opposite Macleay-street). —For surgical and medical cases. Fees, from £3 3s. —Miss McGAHEY, late Matron, Royal Prince Alfred Hospital. Telephone 433 William-street.

Dr. E. J. A. Haynes, of Perth, W.A., has taken into partnership Dr. Jas. Kirkland, late of Ladbroke Square, London.

Dr. R. E. Kane has resigned the appointment of Government Medical Officer at Taroom, Queensland.

ERRATUM.—Dr. Macdonald Gill wishes us to state that the micro-photographs published in our last issue, illustrating his paper on "Glioma of the Spinal Cord," were very kindly prepared for him by Dr. Frank Tidswell, micro-biologist to the Board of Health, Sydney. This acknowledgment was inadvertently omitted last month.

MEDICAL APPOINTMENTS.

NEW SOUTH WALES.

Vallack, A. S., M.B., Ch.M. (Syd.), to be Visiting Surgeon and Dispenser to the Gaol at Berrima, *vice* Dr. George P. Lambert, deceased.

SOUTH AUSTRALIA.

Formby, H. H., of Strathalbyn, to be a Public Vaccinator.

The following gentlemen have been appointed to the Honorary Staff of the Adelaide Hospital.

Cudmore, Arthur Murray, L.R.C.P. (Lond.), F.R.C.S. (Eng.), to be Hon. Surgeon.
Hill, Alfred William, M.D., to be Hon. Ophthalmic Surgeon.
Magarey, Frank, M.B., Ch.M. (Syd.), to be Assistant Surgeon, *vice* Dr. Bickle, resigned.
Rogers, Richard Sanders, M.A., M.D., to be Hon. Physician.
Trott, Frederick Thomas, L.D.S., R.C.S. (Eng.), to be Hon. Dentist.

QUEENSLAND.

Baxter-Tyrie, Charles C., to be Health Officer for the purposes of the Health Act.

WEST AUSTRALIA.

Barber, G. W., M.R.C.S., L.R.C.P., to be Acting District Medical Officer and Public Vaccinator, Kalgoorlie, during the absence on leave of J. A. O'Meehan.
Blackall, William Edward, to be Assistant Medical Officer in the Lunacy Department.
Corley, Anthony, to be Medical Officer of Health, Southern Cross, *vice* E. S. Humphry.
Willis, Dr., to be Officer of Health, Boogardie.

TASMANIA.

Damman, George William, M.B., *et* Ch.B., to be a Member of the Local Board of Health at Penguin.
Webster, J. A., M.D., to be Hon. Medical Officer of the Launceston Hospital, *vice* Dr. G. E. Clemons, resigned.

NEW ZEALAND.

Buckley, Arthur Grey, L.F.P.S. (Glas.), to be Public Vaccinator, Bay of Islands and Ohaeawai.
Cairns, William, M.B., M.S. (Glas.), to be Health Officer for the Port of Whitianga.
Eccles, Horace Dorset, M.R.C.S. (Eng.), L.R.C.P. (Lond.), to be Public Vaccinator, Kawakawa.
Pigeon, Hugh Walter, M.D., to be Resident Medical Officer at the Chatham Islands.
Unwin, Dr., to be Resident Medical Officer, Timaru Hospital.

MILITARY INTELLIGENCE.

NEW ZEALAND VOLUNTEER MEDICAL STAFF.

McAra. William, to be Surgeon-Captain.
Snow, Charles Buchanan, to be Surgeon-Captain.
Fulton, Robert Valpy, Surgeon-Captain, to be Surgeon-Major.
Cheeseman, Herbert Hilton, to be Surgeon-Captain.
Fitzgerald, James, Surgeon-Captain, to be Surgeon-Major.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

The following persons have been duly registered as legally qualified medical practitioners in their respective States:—

NEW SOUTH WALES.

Bernardi, Stanislaus, M.D., Ch.D. (Genoa), 1901; D.P.H. (Turin), 1902.
Nankervis, Arthur Wellesley, M.B., Ch.B. (Edin.), 1899.
Newell, John Adrian, A.M.P. Society, Brisbane, M.B., B.S., 1904, Univ. Melb.
Penny, Alfred Gervase (care of Dr. Nall, Clayfield), M.A. 1894, M.B., Bac. Surg., 1896, Dip. Publ. Health, 1898, Univ. Camb.

QUEENSLAND.

Perkins, Herbert Francis, M.B., B.S. (Dubl.), 1902.
Ross, Thomas Gordon, M.B., B.S. (Melb.), 1903.
Sutton, George, M.B., B.S. (Melb.), 1904.
Tymms, Herbert George, M.B., 1894, B.S. (Melb.), 1895; M.R.C.S. (Eng.), 1899; L.R.C.P. (Lond.), 1899; F.R.C.S. (Eng.), 1901.

BIRTHS AND MARRIAGES.

BIRTHS.

MARLING.—July 31, at Apwey, Marrickville-road, Dulwich Hill, the wife of E. Vernon Barling, M.B., Ch.M.—a son.

HALLIDAY.—July 19, the wife of Dr. J. C. Halliday, of Rockdale—a son.

HEGGATON.—At Murrumburrah, N.S.W., the wife of R. Heggaton, M.B. (Syd.)—a son.

MULLER.—June 16, at Lismore, Richmond River, N.S.W., to Dr. and Mrs. O. R. P. Müller—a daughter.

NEWLAND.—On the 13th July, at Morphett Vale, S.A., the wife of Clive Newland, M.B., M.R.C.S.—a son.

RENNIE.—July 26, at her residence, 40 College-street, Hyde Park, Sydney, the wife of George E. Rennie, M.D.—a son.

MARRIAGES.

HARTIN—HOLMES—On the 3rd August, at St. Peter's Church, Melbourne, Alfred E. Martin, M.A., M.B., B.C. (Cantab.), etc., eldest son of Joseph H. Martin, H.M. Inspector of Mines, Bristol, England, to Ardagh Holmes, only daughter of John Holmes, barrister-at-law, K.J.O., Christchurch, New Zealand, and formerly police magistrate of the Colony of Victoria.

MICHOD—HAMILTON—On the 11th July, at Tambo, Queensland, Frederic Archibald Hope, M.B. (Lond.), M.R.C.S., L.R.C.P., son of Frederic John Michod, of Emsworth, Hants, England, to Alice May Scott, youngest daughter of Terrich Alfred Hamilton, Tambo Station.

BOOKS RECEIVED.

Questions and Answers on Midwifery for Midwives. By A. B. Calder, M.B., M.R.C.S. London: Baillière, Tindall and Cox. Sydney: L. Bruck. Price, 1s 6d net.

Manual of Practical Ophthalmology. By G. A. Berry, M.B., F.R.C.S. (Ed.), with 223 illustrations. 1904. Edinburgh and London: Young J. Pentland. Sydney: Angus and Robertson. Price, 10s 6d net.

Lectures on Clinical Surgery. By H. C. Hinder, M.B., Ch.M., Joint Lecturer on Clinical Surgery, University of Sydney. Sydney: Angus and Robertson. 1904. Price, 12s 6d.

LETTERS AND OTHER COMMUNICATIONS RECEIVED FROM CORRESPONDENTS:—

Dr. J. Macpherson, Young: Messrs. Burroughs, Wellcome and Co., Sydney; Dr. W. R. Fox, North Fitzroy; Messrs. Mayer, Meltzer & Jackson, Melbourne; Dr. B. Poulton, Adelaide; Hon. J. B. Nash, Sydney; Dr. Bryant, Melbourne; Dr. W. G. Armstrong, Sydney; Dr. W. F. Litchfield, Sydney; Messrs. H. J. Langdon, Melbourne; Dr. B. B. Ham, Brisbane: Dr. W. L. Cleland, Adelaide; Mr. A. E. Morton, Sydney; Dr. J. Adam Dick, Sydney; Dr. J. B. Cleland, London; Dr. E. Hirschfeld, Brisbane; Dr. T. H. Lovegrove, Perth, W.A.; Dr. H. W. Bryant, Melbourne; Dr. Simpson Newland, Adelaide.

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AUSTRALASIAN MEDICAL GAZETTE.

ON "FANGO" TREATMENT.

By R. Scot Skirving, M.B. (Edin.), Lecturer in Clinical Medicine, University of Sydney, and Physician to the Royal Prince Alfred Hospital.

DURING the past three or four months I have been seeing a good deal of the hydro-therapeutic and other forms of treatment carried out in certain health resorts in France, Switzerland and Italy. It is especially, however, in regard to mud baths that I wish to speak just now.

"Fango" treatment is the term used in many parts of Europe for the medical application of mud to the affected parts of the body. In Italian the word "fango" means mud, and the variety used is of a specially adhesive glutinous type. In English I know no term which completely covers its stodgy sticky character, but in Scots, a dialect rich in convincing expressive terms, the word "glaur" exactly describes the appearance and consistency of "fango."

The mud used is, so far as I know, of two main varieties:—(1) True "fango" chiefly found in Italy, where its use has been known for ages; (2) and the peaty soils used in central Europe in the "Moor-bad" of German and Austrian health resorts.

The "fango" of North Italy—of such places as Battaglia or Acqui—is described as a "vegeto-mineral substance," a large portion of which is no doubt of volcanic origin. Its composition is complex and varied. It contains some 35 per cent. of moisture, and among the many inorganic substances I may mention the following:—The oxides of iron and aluminium, the carbonates of calcium and magnesium, and the sulphide of calcium. Potash, soda, barium and lithium are also represented. Sulphur, and a bituminous material of organic origin, do not even complete the varied components of the extremely heavy mud. In the Acqui "fango" there is a relatively high percentage of iron. The "Moorbad" of places such as Franzenbad is composed of peat. This substance contains a considerable amount of formic acid, as indeed does the peaty soil of various places in the British Islands—a fact well known in connection with the question of lead-poisoning by water obtained from a peaty catchment area.

"Fango" treatment, I may say, is by no means strictly confined to the districts in which the mud is obtained. On the contrary, in many other places the treatment is carried out with mud obtained from Italy, and artificially heated in suitable contrived appliances. For instance, at Bex-les-Bains, in the Rhone Valley, the mud used is imported there from Battaglia. In these various places where the mud-treatment is practised various other remedial measures are likewise carried out, such as saline and sulphur baths, douching, Nauheim baths, massage and electricity.

It is especially, however, in places such as Acqui, Battaglia, Dax, and Franzenbad that the mud-treatment is the special feature. In some places the patients sit bodily in the natural mud, in the same way that they sit in the Postmaster's Bath at Rotorua, but in most of them the hot mud is applied topically to the affected part in a room suitably warmed and arranged.

Now as to the action of the mud. It is very difficult to believe that absorption of any of the constituents of the substance applied can be credited with an appreciable therapeutic action. One hears it often stated on the Continent, not only by the laity, that such and such a mud contains so much iron, or sulphur, or iodine, and that, therefore, it is specially useful in such and such a morbid condition. For my part I regard such views as almost always vain imaginings. I cannot persuade myself that absorption to any practical remedial extent can occur. I believe—and the men whose opinions I think most worth listening to confirm me in the belief—that the beneficial effects are, in nearly every instance, simply due to the heat, moisture, and weight of the substance applied, and to the sweatings induced thereby. In short, you have a huge clinging poultice acting locally on the peccant part, with the general depurative effect of a profuse perspiration—in fact, a kind of Turkish bath, with a local and special beneficial effect not unlike that seen in Tallerman's treatment.

I can, however, readily conceive that where the mud is highly sulphurous, or contains much formic acid, that a local counter-irritant influence may be exerted in the skin; but I repeat that I regard the application as essentially that of a gigantic poultice—a poultice which, like all poultices, bleeds congested areas, deeply seated, into more superficially placed vascular expansions, and by this temporary depletion and the subsequent reactionary filling, stimulates a healthier tissue change, and thus is favoured that removal of inflammatory products which in not a few cases is happily witnessed. If this be the mode of action, one can readily understand why the most benefits are observed in fairly recent cases.

Now what are the conditions likely to receive good from "fango" treatment?

When I read the indications as set forth in the various handbooks of these resorts, it seems difficult to believe how anyone can remain ill. The whole gamut of human suffering seems contained in the list of maladies to be benefited at these various places. Let me then mention a few of the most common :—Rheumatism in all its forms, gout, rheumatoid arthritis, neuritis, especially sciatica, whether due to nerve inflammation or not; neurasthenia and hysteria; habitual constipation; all kinds of local arthritis, traumatic or otherwise; appendicitis, especially if an indolent phlegmon persists in the iliac region; and, lastly, in pelvic and uterine inflammations. I forget quite as many as I set down.

I have now watched carefully a good many cases, and done my best to learn from men practising this branch of medicine, and I am led to think that the safest plan is to take a moderate view of the possibilities of cure and benefit.

Recent cases of arthritis due to rheumatism, gout, or tramatism very frequently receive marked relief or cure. Here in Acqui, where the Italian Government have a large establishment for soldiers with injuries and rheumatic affections, the benefits are indisputable. Cases of neuritis of short duration, and especially sciatica, sometimes get well with startling rapidity, combined, of course, with rest. It seems certain also that women with non-suppurative inflammatory troubles in the pelvis or in connection with the uterus and ovaries do likewise receive great benefit, loss of pain, and disappearance of exudates being often reported.

With regard to the more chronic conditions of various kinds, the results are naturally not so encouraging. Where organic articular changes exist, or where neuritic troubles have lasted for many months or even years, it is hardly reasonable to expect brilliant results. I am certain that although a loosening, temporary perhaps, of the stiffness and rigidity seen so often in chronic gout, rheumatism, or rheumatoid arthritis does follow treatment, yet I have not collected any evidence which could justify many ignorant persons in the extravagant and cruel praise which they have given to certain of these places of treatment.

Those of us who have watched the after effects of treatment at the New Zealand hot springs will note how similar the class of cases likely to receive great benefit there is to those I have described as being helped by treatment at these European mud-baths.

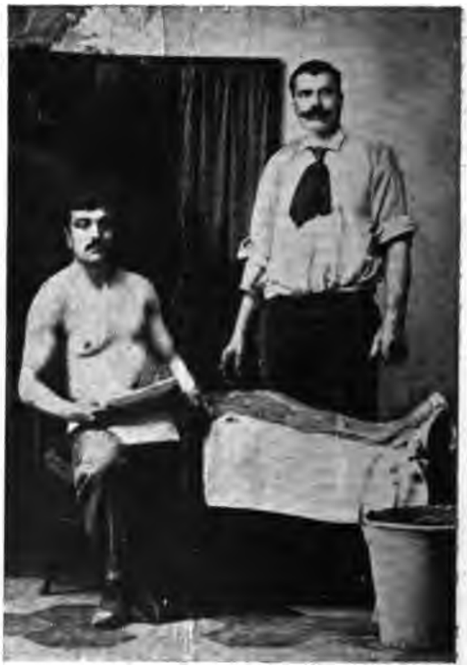


FIG. 1.

The mode of application varies in different places, and with the part of the body affected. (See Fig. 1.) Generally speaking the patient lies on a bed or couch with a rubber cloth and linen sheet spread under him. Mud, either naturally hot or artificially heated (47° C. to 50° C.), is thickly and quickly applied over the affected area. The sheeting is then deftly made to enclose the whole of the limb or body, as the case may be, and usually further coverings are applied if a profuse general diaphoresis is desired. (See Fig. 2.)

In this poultice-pack the patient remains from twenty to forty minutes as ordered.

after which time he enters either a simple or sulphurated warm bath, and is washed clean of the fango. He then at once goes to his bed and remains there from one to two hours till his skin is dry and the superficial vessels have returned to their normal calibre. This process is repeated daily for three, four, or five days in succession, and then a day "off" is allowed, when the sequence is again repeated. (See Fig. 3.) From 15 to 21 applications constitute a cure. It is right to say that at first pains in the affected parts are often aggravated; the treatment is said to be "waking up the disease," and further that the benefits to be expected are often not observed "till after the patient has left the place of cure!"

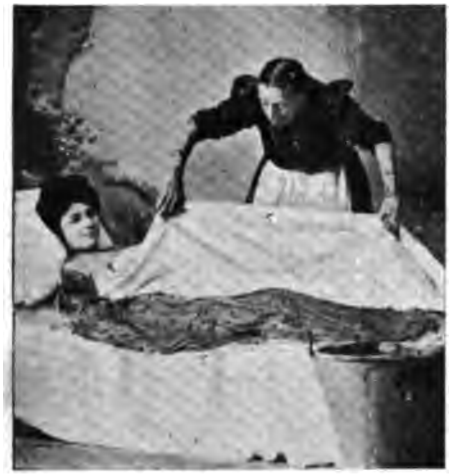


FIG. 2.

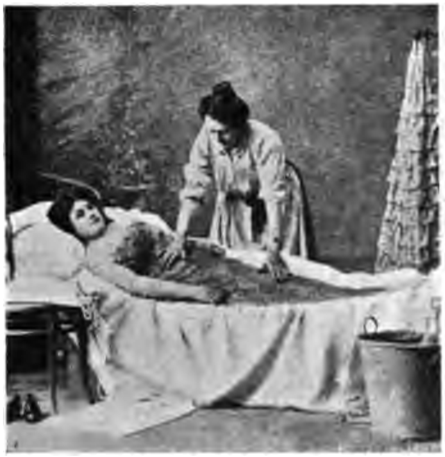


FIG. 3.

Massage and electricity form frequent adjuncts to the "cure." Little or no medicine is ordered, and there seems less insistence on a rigid regimen than used to obtain some years ago. At Aix, in Savoy, strawberries and tomatoes used to be strongly forbidden to rheumatics; now, from certain recent observations on the composition of tomatoes, I find medical men no longer forbid the latter vegetable.

In Acqui the mud is stored in huge ancient reservoirs, at the bottom of which bubble up hot springs at a temperature ranging between 115° and 140° F., these giving the mud a sufficient warmth. The water itself is charged with sulphates and chlorides of lime, potash and soda. I had intended to say something about the use of high frequency currents and the X-rays in nerve pain, but I find the paper has already exceeded the length I intended.

To an Australian practitioner, and I suppose even to a medical man practising in England, one is immensely struck with the energy, enterprise, and skill shown on the Continent in making use of the natural resources of the country, such as baths, mud deposits, and mineralised springs.

No doubt the puffing of such things is often overdone, and not seldom degenerates into a species of quackery. Nevertheless we have much to learn in these matters from our Continental brethren; such benefit which often follows treatment is not entirely due to regimen, change, discipline, and a doctor with a foreign name. Not so; the baths and the waters often undoubtedly do good. In New South Wales in this connection we have not yet sufficiently discovered or developed our resources, far less exploited them. Yet I cannot doubt that Australian Vichys, Carlsbads, and Acquis will one day attract patients, some of whom any way will find healing and comfort therein. The Pools of Siloam do not exist only in the old world. Take New Zealand for instance. If Rotorua were in Switzerland, or at any accessible place in Europe, it would be the Mecca of every cripple on the Continent, and with as much justification as exists at three-fourths of the health resorts advertised so widely.

I understand much has recently been done to bring Rotorua up to the Continental standard, but it is especially with regard to the use of the "fango" treatment that I venture to suggest the possibility of utilising the natural resources of that district. At Tikiteri and other places I remember seeing vast pits of hot mud. Why not use them as the Italians use their "fango"? or export the mud to more populous centres for use artificially heated, as I have pointed out is done in so many places on this side of the world?

AN OBSCURE CASE OF JOINT AND BONE CHANGES IN LOWER LIMBS, PRESUMABLY TROPHIC IN NATURE.

By Cecil Purser, M.B., etc., Hon. Physician, Royal Prince Alfred Hospital, Sydney; and J. B. Cleland, M.D., etc., late Resident Pathologist, Royal Prince Alfred Hospital, Sydney.

The following is the history of a most interesting case who was admitted into Prince Alfred Hospital, under my care, on October 10th, 1902. The patient, a single man, *æt.* 25 years, sought admission for the express purpose of having both his legs amputated, he being paralysed in both lower limbs, and had been lying in the one position, on his back, in a sort of couch on wheels, for a period of seven years. He practically lived altogether night and day in this couch, and he gained a livelihood by playing and teaching the mandoline. He thought it would be much easier to play and to live even if he could be fixed in some sitting position.

He was born and had lived in a thickly populated suburb; no history of excessive potus; food had always been good. He was in excellent health except for the trouble in lower limbs, and was accustomed to smoke ½ oz. of black tobacco per week and a packet of cigarettes per diem. Father and mother both alive and healthy. There had been four brothers—one alive and healthy; two died young, cause unknown; one died of meningitis, following otitis media. No known history of fits, paralysis, neuroses, insanity, rheumatism, tubercle, or gout in his own family or collaterals. Patient had never had any complaint before the present one; no gout or rheumatism.

His illness began very gradually, its commencement being traced to 11 years previously, when after an act of coitus he felt his knees give way, although he did not fall down. He himself assigned all his trouble to coitus, he having contracted the habit very young with a female acquaintance, and had been accustomed to indulge fairly often. From this date he gradually became weaker, noticing it first in the anterior thigh muscles, and then a gradual progressive weakness of both legs. For about three years this gradual weakness increased, and *pari passu* with it, he noticed a wasting in the muscles, and it appeared to travel from above downwards—thighs, knees, calf-muscles, ankles and feet being affected in that order. During this three years he noticed that when he jarred his feet he had a sharp shooting pain in the legs and groin, and when attempting to kick a football he felt as if he was kicking his leg off; and as the weakness progressed, when he would start running he could never stop himself without falling down. About this time *i.e.*, eight years before admission, he got a thorough drenching in a rainstorm, and remained in his wet clothes for about eight hours, when he retired to bed. The next morning he experienced severe sharp shooting pains in both legs, and this was the first time that he remembers experiencing these pains without some cause, as the jarring before mentioned. He then had to remain in bed for six weeks, unable to move, and still having these sharp shooting pains. During this time the left hip-joint became stiff, and a few weeks later the right hip also became stiff. When he was able to get out of bed he had to use crutches, and remained in this condition for six months, when he was admitted to Little Bay Hospital, and he was kept there for seven weeks, and discharged as incurable, after having been examined under an anæsthetic. While in the hospital his left knee became stiff; this was followed in a few weeks by the right knee, and a little later on both ankles became stiff also. For a further period of 12 months he managed to get about on crutches, and then the stiffness became so bad that he had to take absolutely to his couch, and he has not risen for the last seven years. About the same time as he took to his couch the shooting pains disappeared, and he has had no symptoms, excepting the paraplegia, and some hyperæsthesia over both legs, which has been present ever since the chill.

He had been treated by Turkish and vapour baths, and by all sorts and conditions of quacks, including Austrians, aboriginal blacks, and Hindoos. During all this time patient has had no symptoms at all above the pelvic plane, and denies absolutely any history of gonorrhœa or syphilis.

Present Condition.—Fairly well nourished. His face is of a uniformly somewhat unhealthy pinkish tint, lacking any expression, the naso-labial furrows being practically absent. He lies propped up in bed capable of only very limited movement. Temperature 98 6 deg. Fahr

Nervous System.—Intelligence good; no headache, insomnia, delirium, or convulsions. Speech inclined to run in a monotone.

Special senses.—Smell, normal to ammonia and essence of peppermint. Sight—Field of vision very good; eyesight very good. No diplopia. Fundi normal. Taste and hearing normal.

3rd, 4th and 6th Cranial Nerves.—Pupils equal, react to light and convergence; movements of eyelids very good; no ptosis; eyeball movements good; no nystagmus.

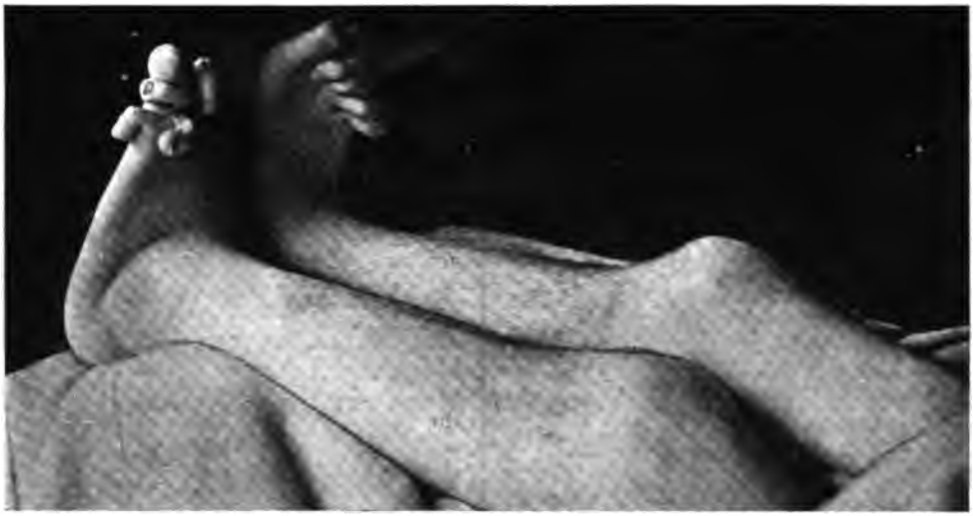


FIG. 1.—CONDITION OF LEGS AND FEET ON ADMISSION.

5th, 7th, 9th, 10th 11th and 12th Nerves.—Face sensation and jaw movements good; no facial paralysis or spasm; laryngeal and pharyngeal movements normal; palatal reflex present; pharynx sensitive. Tongue and mouth movements good.

Trunk Muscles,—Diaphragm, trapezius and erector spinæ normal. Abdominal muscles good; no wasting in any.

Cranium and Spine.—No deformities or tenderness.

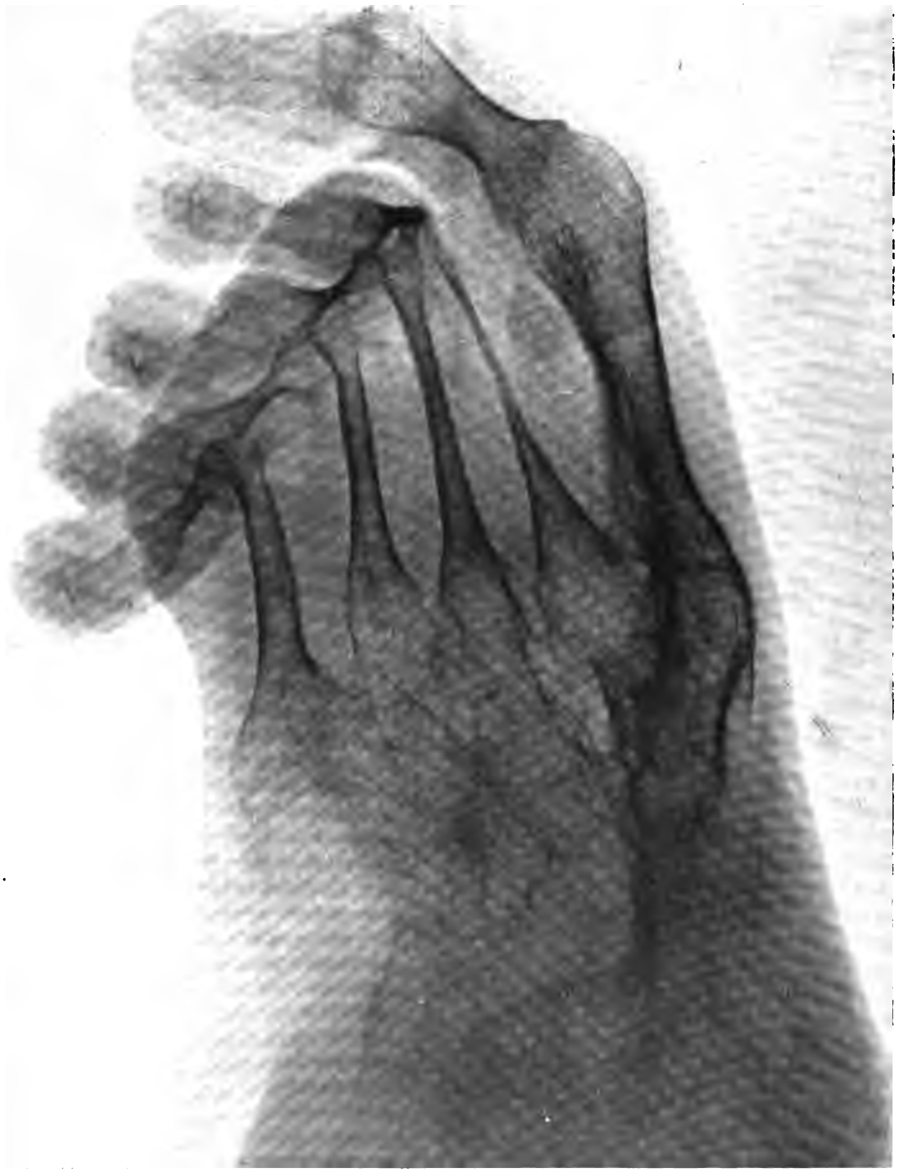
Motion. — Elbow, shoulder and wrist movements are free, strong. The muscles around these joints are well developed. The finer movements of hand are good. The right grip is slightly stronger than the left, as 18 and 15. Hip, knee and ankle movements entirely absent. In the toes there is some slight movement of flexion and extension. These movements are much limited by the contractions, and are of a spasmodic nature, a single voluntary movement being impossible. Extension is much more marked than flexion. He is unable to tell which toe he moves.

In the muscles of the thigh there is some slight power of contracting the glutei, sartorii, the abductors, adductors and hamstrings of both sides, and the quadriceps extensor of the right side. He is able to contract any one set at will, but sometimes sets others involuntarily in contraction at the same time.

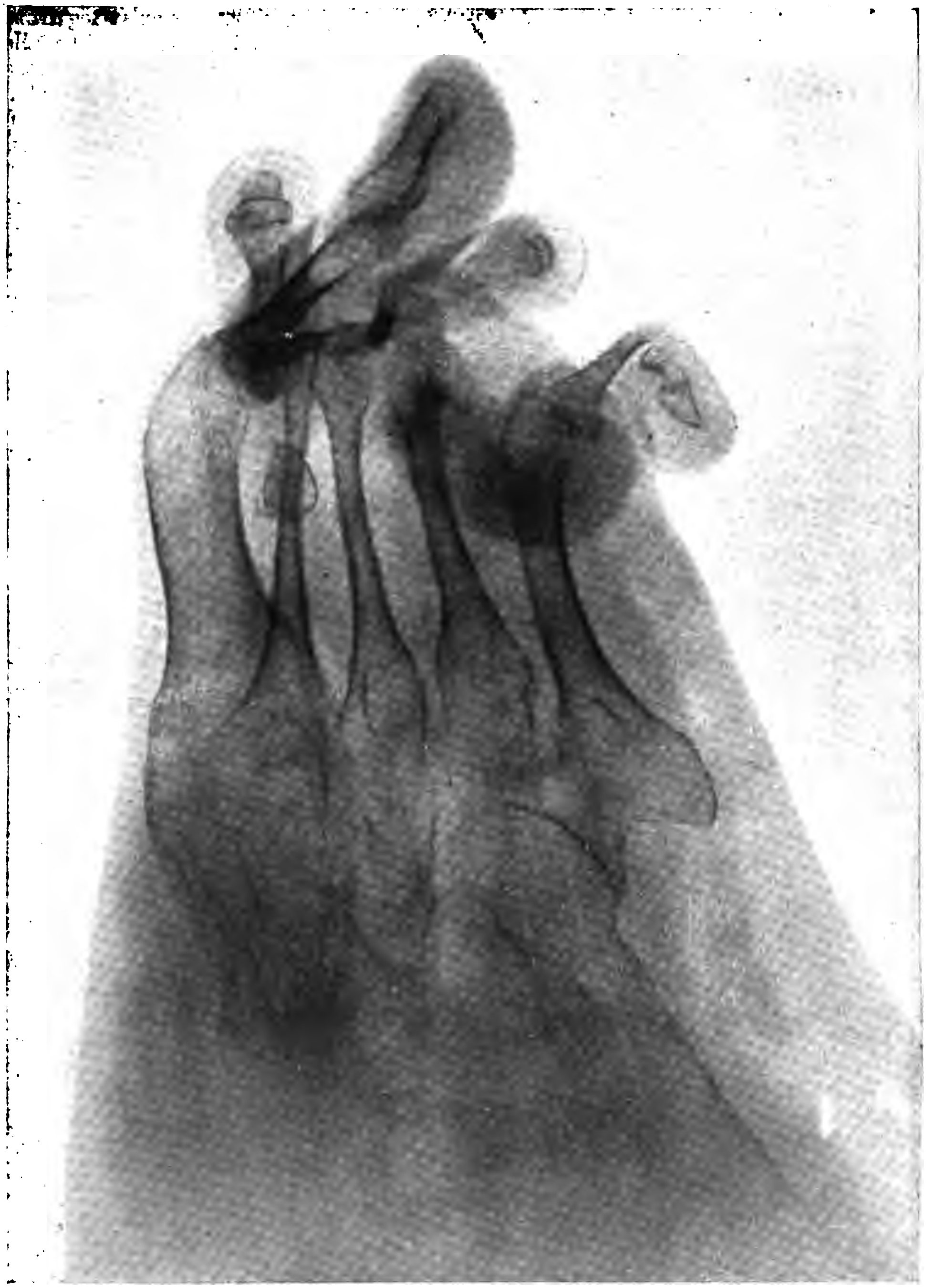
Muscles of leg.—On attempting to flex his ankle, he sets the extensors of his toes in clonic contraction, the contraction appearing to be limited to the superficial layer of muscles. The two sides are apparently similar. On attempting to extend at the ankle-joint, the gastrocnemii and solei contract, and the contraction is tonic, unlike the flexors. The left leg is rotated inwards at the knee-joint, so that the tibia is the most internal portion of the leg, and the calf muscles the most external. All these contractions require great effort.

Muscles of right foot.—The three outer dorsal interossei, the adductor hallucis, and abductor minimi digiti are overpowering their antagonistic muscles. The extensor longus digitorum and extensor longus hallucis actions are also predominating.

Muscles of left foot.—The actions of the abductor minimi digiti, third and fourth dorsal interossei, and adductor hallucis are in



RADIOGRAPH OF LEFT FOOT.



RADIOGRAPH OF RIGHT FOOT.

predominance. First and second dorsal interossei are neutralising one another. The long extensors of second and fourth toes are over acting. These actions are tonic.

Gait absent. Handwriting good.

Sensation.—If a straight line be drawn horizontally through the upper part of the symphysis pubis around the thigh on both sides, then below this there is a slight general increased susceptibility to both tactile and painful sensations all over the legs, the soles included, but no one part is increased more than another.

Thermal sensation to both heat and cold is equally slightly diminished all over below this same line.

Muscular sense is good all over the legs as far as can be tested. No formication anywhere. No girdle pains.

Sphincters.—Rectal and vesical sphincters good. Sexual function normal.

Reflexes.—Jaw reflex present; elbow jerks not obtainable; wrist jerks present; knee and ankle jerks; ankle and rectus clonus unable to be tested on account of fixation of joints. Plantar reflex on both sides gives good contractions of tensor fasciæ femoris. Palmar reflex present. Abdominal, epigastric, and cremasteric reflexes very active.

Vaso-motor and trophic changes.—To the Faradic current the response of all muscles of thigh and leg is generally better on the right side.

The peroneals of left side respond at distance of 1·4.

The peroneals of right side respond at distance of 2·2.

	Right side.	Left side
Flexor digitorum ..	1·4	0
Tibialis anticus	4·5	2·5
Quadriceps	8·5	7·8
Vastus internus	5·5	5
Vastus externus	3·2	0

The constant current on both sides—

Over quadriceps extensor K.C.C. > A.C.C.
Over vastus externus .. K.C.C. > A.C.C.
Over vastus internus .. K.C.C. > A.C.C.

This was only obtainable on right side.

Over ex. com. digitorum K.C.C. > A.C.C.
Over peronei .. .. .. K.C.C. > A.C.C.
Over right dorsal interossei K.C.C. > A.C.C.
Over left dorsal interossei nil.

Cutaneous system.—Skin slightly moist and warm, sallow tint. Mucous membranes not anæmic. Finger nails normal. Subcutaneous tissues normal above the hips, much diminished or absent below. No lymphatic enlargements.

Respiratory system.—Normal.

Circulatory system.—Normal.

Arteries not sclerosed. Pulse 92; good tension and regular. The left leg from the anterior superior spine to external malleolus measures 31·5 inches; the right leg measures 31 inches. The upper part of femoral tuberosity on the right side appears to be not so far forward as that of the left side, and is ¼ in. closer to the anterior superior spine.

Urine.—Sp. gr. 1014. Alkaline. Abundant phosphates. No pus, albumen, blood or sugar.

At first sight this appeared to be an aberrant form of progressive muscular atrophy, but on closer examination and thoroughly going into the case this proved to be wrong, A radiograph of the feet showed extensive wasting and disease of the bones of the foot. It will be observed from the radiograph, which is an excellent one, that the metatarsals especially are wasted away, being in some instances almost thinned away to nothing. The tarsal bones appear as fine networks of cancellous tissue.

Since it was evident that no medical treatment would do any good, and the patient wished if possible to be placed in a sitting posture, or made so that he might be able to sit up, a consultation was held with Dr. Clubbe, an hon. surgeon to the hospital, and it was decided to administer an anæsthetic and see if there were any possible chance of breaking down the joint adhesions. Under an anæsthetic it was found that all the joints were immovably ankylosed, and it was then decided to amputate. Both the thigh bones were broken at the hip-joint, and one leg was amputated about the upper third of the thigh. This healed by first intention, and a week later the left leg was amputated in a corresponding position, and both stumps were fixed so that the patient could be fixed in a sitting posture. He made an uninterrupted recovery, both the hip-joints becoming fixed. Three weeks after the second operation he was transferred to the Carrington Convalescent Home at Camden, where he stayed for about six weeks, gaining about one stone in weight, and he left the institution perfectly happy, and to all intents and purposes well, being able to move about very comfortably and well in a wheel chair.

Accompanying are copies of the radiographs of the feet; also photographs of the macerated knee-joint showing anterior and posterior views, and photographs of feet in various positions before amputation.

I am indebted to my house physician, Dr. Broadbent, and clinical clerk, Mr. J. F. Watson, for help in compiling the notes of the case, and also to the hon. radiographer to the Prince Alfred Hospital, Mr. A. C. Mole, and Mr. Downer, of the Sydney University Pathological Museum, for photographs.

Appended is a pathological report of the case, with notes by Dr. J. B. Cleland, late resident pathologist to Prince Alfred Hospital.

PATHOLOGICAL REPORT.

Two legs amputated through the thigh.—All the small bones of the foot, the ankle-joints and knee-joints were found to be more or less firmly ankylosed together by means of a very porous bone containing wide open spaces, out of which much fluid fat oozed ; this bone could be indented with the finger and could be cut with a knife (though with a gritty feeling). The adjacent cancellous ends of the bones were of a similar nature, showing no compact bone under the periosteum, but merely this reddish, oily, very porous and soft bony tissue. These changes were most marked in the larger joints. The diameters on cross section of the shafts of the femur, tibia, and fibula were diminished ; their medullas were of a pinkish tinge and had encroached on the compact layers of the bones, reducing this portion to about half the normal thickness. The metatarsal bones were much atrophied, their calibre in the middle being no thicker than a thick slate pencil.

The popliteal and anterior tibial arteries seemed very thin in their walls. The muscular tissues, even the interossei, seemed of normal colour and consistence. The amount of interstitial fat in the tissues of the leg seemed increased, however. The sciatic nerve showed no naked-eye changes, neither did the skin.

The peculiar deformity of the foot seemed to be due to pressure exerted on the softened and atrophied small bones of the foot.

MICROSCOPICAL EXAMINATION.

Cancellous tissue of end of femur.—No active process seems to be going on, but the cancellous spaces are very widely dilated and occupied by fat cells, while the bony trabeculæ, which appear as islands, are dense and firm, and show no excess of nucleation. In a few places the bony lacunæ seem to be enlarging, and this gradually passes into the formation of spaces occupied by fat cells. In fact, the general appearance at once suggests the way in which, in fatty infiltration of the heart, the fat cells push their way in between the muscle cells, isolating them, and finally causing their absorption.

Skin covering the leg.—Little change could be detected. The horny layer was very poorly developed, and the walls of the arterioles were thickened (periarteritis).

Great sciatic nerve.—There is an increase of fibrous tissue, of a not very cellular type, between the bundles of nerve fibres. The arterioles in this show decided periarteritis, and their walls are rich in nuclei. The perineurium surrounding the bundles is slightly thickened to four layers of laminated fibrous tissue, and from this wall a small amount of fibrous tissue accompanies the small arterioles in between the fibres. There is an increase of fibrous tissue and interstitial nuclei between the individual nerve fibres, this new tissue tending to run in bands and form a network. In some bundles this interstitial overgrowth is very marked, and suggests the appearance of an intralobular cirrhosis of the liver ; in others, the fibrosis is most marked towards the periphery, where it forms loose laminated bands parallel with the perineurium and so cutting off the nerve fibres ; in still others, the interstitial overgrowth is slight.

On comparing this sciatic nerve with a healthy one taken from an adult man, the difference between the two is well marked. In the former, the fibrous tissue between the bundles is much denser, though not much increased in amount ; the perineurium is thicker and more laminated, and the individual nerve fibres are more separated from each other by interstitial fibrous bands and connective tissue cells.

Popliteal artery. — This presents few changes ; in places there is a slight degree of endarteritis, and there seems a tendency to atheromatous degeneration.

Dr. Flashman, Pathologist to the Department of Lunacy, New South Wales Government, carefully examined the above tissues microscopically, and confirms the above descriptions.

Description of bones of the leg (after maceration)—*Knee-joint.*—The patella is ankylosed to the front of the femur. The adjacent surfaces of the femur and tibia are united in extension by very soft widely cancellated bony tissue. The tip of the head of the fibula is similarly united to its articular surface on the tibial head. The articular surface of the femur not in contact with the tibia except in flexion is roughened and widely porous (open cancellous spaces). The patella and adjacent cancellous ends of the femur, tibia and fibula are fragile, porous and spongelike, with a greasy feel from enlargement of the cancellous spaces and their occupation by fat.

Hip-joint.—There is every reason to think (from the clinical history) that the acetabular cavity and head of the femur were similarly adherent at the time of operation, and exhibited similar enlarged cancellous spaces. The diameter of the shaft of the *fibula* is lessened and the bone semi-transparent.

In the foot nearly all the joints (except that of the external malleolus) are ankylosed by fragile porous bone. The lower ends of the tibia and fibula, the tarsus, and the cancellous ends of the metatarsus and phalanges consist of cancellous bony tissue with wide spongelike spaces. The shafts of the metatarsals are much atrophied so as to be no thicker than goose-quills in places. The bones feel soft and greasy. The whole skeleton of the leg is remarkably light in weight.

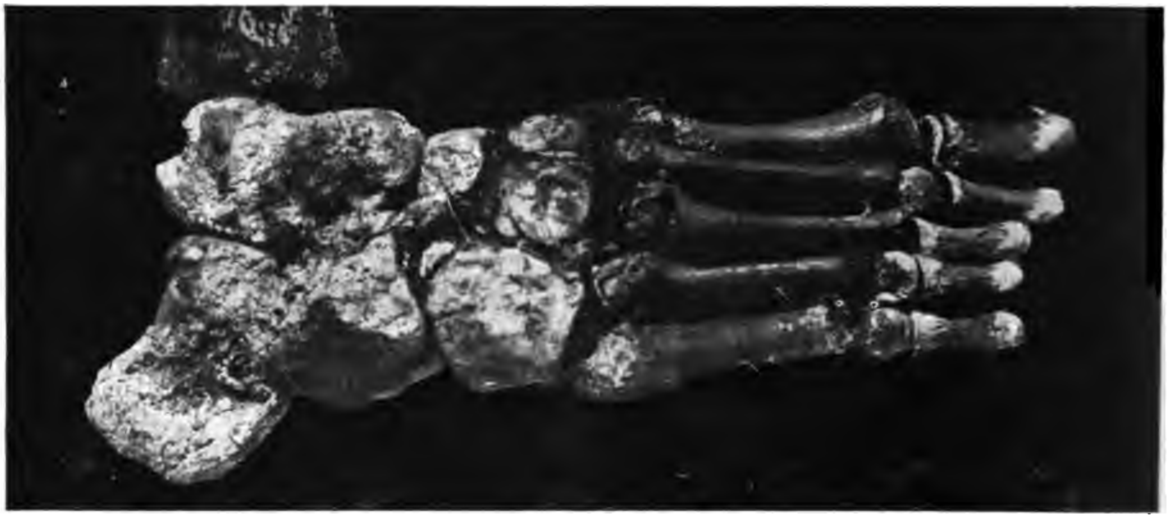


Fig. 4.—Foot of Supposed Anterior Poliomyelitis.

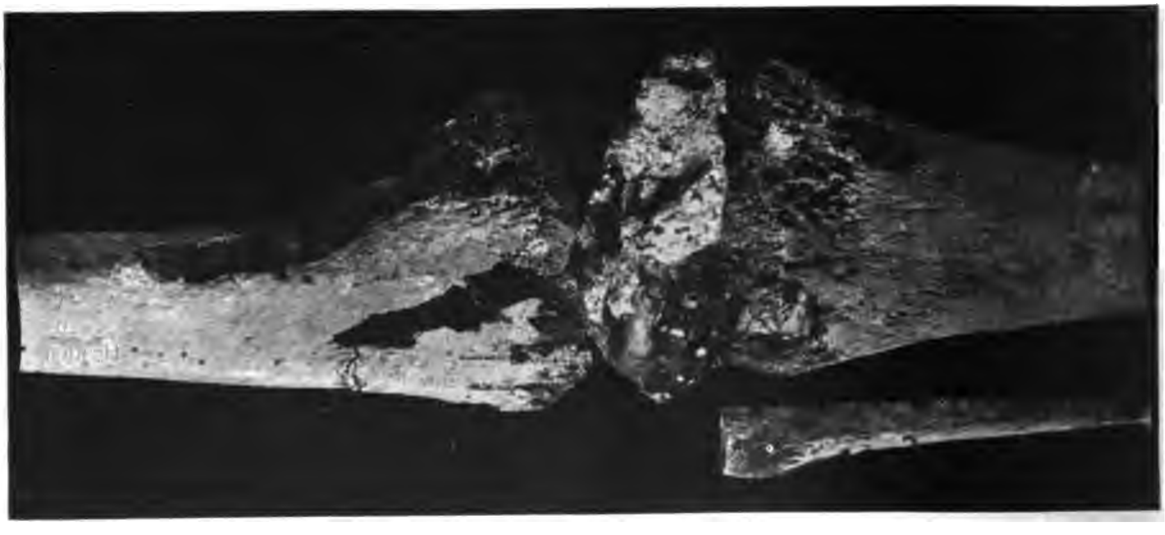


Fig. 5.—Knee Joint of Supposed Anterior Poliomyelitis.

As throwing some light upon the case, it is interesting to find in the Pathological Museum of the Medical School, Sydney, the skeleton of a leg from a case of infantile paralysis with paralytic talipes equino-varus, which shows bony changes partially identical with those found in this case. (See Figs. 4 and 5.) The cancellous adjacent ends of the femur, tibia and fibula, of the patella, of the lower ends of the tibia and fibula, and of the small bones of the foot show the same porous widely-cancellated bony tissue with the meshes occupied chiefly by adipocere, though some are empty. (Adipocere, due to imperfect removal of fat during maceration, is absent from the beautiful specimen of the bones of the leg of our patient, owing to the care exercised in its preparation by Mr. Downer, the museum's caretaker, who by means of ammonia has managed to remove nearly all the fat from the spaces.) This infantile specimen differs, however, in the absence both of thinning of the shafts of the long bones (fibula and metatarsals) and of ankylosing bone. In this amyotrophic (?) absorption of bone it will be noticed that the epiphyseal cartilage offers no barrier to the morbid process, which extends fully into the cancellous ends of the shafts.

The question arises, Are the bone changes in this poliomyelitic case the result of the loss of control by trophic influences, or are they due merely to disuse and consequent absence of natural stimuli? Gowers in his "Diseases of the Nervous System" (vol. i., p. 368, ed. 1892), makes only the following reference to bony changes in acute anterior poliomyelitis "The bones have been found, not only shorter than normal, but also smaller, with their angles rounded, the compact substance more uniform and the Haversian canals smaller (Joffroy and Achard)." In Clifford Allbutt's "System of Medicine," Dr Allen Starr says: "Mention must also be made of the smaller size of the bones in the affected limb. This is rather an arrest of growth than a pathological state." Apparently, then, in this infantile case, either the change in the anterior cornua affected a portion specially governing bony nutrition as well as the usual part governing muscular nutrition (presumably from the absence of cited cases, a very rare condition) or else disuse led to the peculiar bony changes (likewise apparently quite as rare a result in the after-histories of cases of acute anterior poliomyelitis). Was this case truly one of the last-mentioned disease, or was it another instance of a disease identical with the one here described in the adult? Unfortunately for the comparison, we have no means of ascertaining, beyond the particulars on the label, the nature of the little patient's clinical symptoms, or the particulars of the post-mortem examination.

Other diseases in which trophic bone changes are said to occur are:—(1) Locomotor ataxy (Charcot's knee, etc.); (2) rheumatoid arthritis. Of the former, Gowers, in "Diseases of the Nervous System," says: "There is occasionally an extraordinary wasting of the articular ends of the bones, which seems to begin by rapid erosion of the cartilages, extending quickly to the bone beyond, the extremity of which may be much reduced in size and altered in form . . . . In the bones, the compact tissue has been found thinner and more porus than normal. The trophic changes in the skin, bones and joints are probably due to the process of degeneration in the peripheral nerves. The degeneration has been found in all cases of the kind in which it has been looked for, and also in the nerves of diseased joints." Dr. J.A. Omerod, in "Clifford Allbutt's Medicine," contrasts the bony changes in these two conditions thus:—"It may be broadly stated that extensive and rapid destruction of tissue, particularly of bone, with osteophytic deposits in the capsule and synovial membrane, forming eventually spikes and sheaths of calcareous matter around the joint, mainly occurs in Charcot's disease; while slow thickening, eburnation, and outgrowths of bone, with 'lipping' of the cartilages, occur mainly in rheumatoid arthritis." From these descriptions it is evident that in these two diseases there is not a mere passive atrophic bony change, but also a pathological activity of the degenerating tissue, as evidenced by new aberrant bony formation. These changes show an irritative as well as a degenerative side, whereas in the case we now describe, all the bony changes, with the exception perhaps of the ankylosing new bony tissue, are degenerative. Such a difference suggests a perversion of trophic influences on the one hand in contradistinction to their simple diminution or absence in the other. If we conclude from this that there is no *perversion* of trophic influences to the bone in this case, we must suppose the changes due to either (1) a simple degenerative change, allied to that of senility, beginning *ab initio* in the bone, or (2) the *absence* or *diminution* of trophic influences dependent on (a) disuse of the bones and joints (absence of natural stimuli), or (b) failure of the trophic influences to reach their destination. Against the latter view (*i.e.*, 2) was the absence of trophic changes in other tissues, especially the muscles (widened by there being no R.D.). In favour of 2 (b) was the increased fibrosis of the sciatic nerve, which might be supposed to interfere with the passage of trophic influences, but why, if such were the case, the joints and they alone should be deprived in this way, does not appear clear. It might be suggested that disuse (with consequent absence of natural stimuli and diminution of trophic influences) might have caused the disease, but on the face of it, it appears inconceivable that for the sake of exciting pity and compassion in his vocation the patient should have kept the lower limbs so quiet and motionless, both by day and night, sleeping and waking, as to deprive them sufficiently of their natural stimuli. From the standpoint of the bony changes the most likely hypothesis appears to be that the disease is one beginning *de novo* in the bones themselves, that is of a simple degenerative type, indicating the premature senility of the tissue ; that, as sections of the bones show, the bony tissue simply absorbs and is replaced by fat without any active inflammatory phase ; and that the increased fibrosis of the sciatic nerve is possibly due to its diminished functional activity.

The following are some further references to somewhat similar bone and joint affections, especially in nervous diseases.

The joint changes in syringomyelia are, according to Dr. Starr, in "Albutt's Medicine," similar to those of locomotor ataxy :—" A large effusion within the joint, with great thickening of all the tissues, and later an absorption of the bones, with an atrophy of the joint surfaces, spontaneous fractures, due to a spongy and brittle condition of the bones, have been recorded."

Gowers describes no bony changes as following on peripheral neuritis.

The condition in no wise resembles osteomalacia, inasmuch as the bony trabeculæ which remain are not decalcified, and the marrow is not red.

Dr. Clutton, in Treves' " System of Surgery," describes " atrophy of bone from simple causes, as want of use or the changes incidental to old age," which somewhat resembles that of the case here described. " The bone becomes light and brittle, the cancelli and the medullary cavity being enlarged and filled with fat." The causes given are senility, long-continued confinement to bed, the cachexia of malignant disease, etc. Our case differs in the absence of any cause such as cachexia or confinement to bed (till the disease itself produced this), in the youth of the patient, in the ankylosis of the joints, and in the extreme degree of the absorptive change.

REMINISCENCES OF THE PLAGUE PANIC OF 1900.

By David Wield, M.A., M.D., Brisbane.

(*Abstract*).

EARLY in 1900 plague broke out in Sydney. It was a new disease—new at any rate to Australia—and the name brought with it associations of horror. Little wonder, then, that Queensland was alarmed, and that public opinion, thoroughly roused by the news of its nearness, immediately demanded the closest watch lest this fearful visitation should cross our frontiers or descend upon our shores. Trains were stopped on the border and their passengers subjected to rigid examination. Vessels from the south were poled out from the quays, their hawsers tarred and protected, their gangways watched all day and removed at night, their cargoes refused or fumigated, their passengers examined, their rats destroyed, and every other possible precaution was adopted to exclude the scourge.

In the capital, Brisbane itself, the Government and the Metropolitan Joint Board had joined forces, and, in the way of preparation, some good work was done. Urged on by their medical adviser the Joint Board had accumulated the ammunition of war. Cellars full of antiseptics had been collected, a plan of campaign had been sketched, and, in pursuance of that, posters and pamphlets describing and encouraging house and drain cleansing had been scattered broadcast. Nurses were retained for plague work, and a cleansing gang of over a dozen men were enrolled and ready to set to work at once. For duty in the plague hospital, medical officer after medical officer had been retained and resigned, some for reasons private and unexplained, but others because of the dilatory action of the Government.

The Government had undertaken the building and furnishing of the Plague Hospital. This work went on so slowly that in some three months all that had been provided for the accommodation of the possible patients and their hospital staff was an isolated country house situated in a large paddock on the banks of the Brisbane River, about six miles from the centre of the city. The house was supposed to be fit for the administrative block of the proposed hospital, while the wards and nurses' quarters and kitchen were represented by the frames, and little more, of three small wooden buildings in a low-lying part of the paddock. Accommodation for the reception of contacts was being provided for by the renting of two small cottages in an adjoining paddock. This "isolated" hospital was connected with the public road by its own private way of about one-third of a mile, and was accessible from the river by the decayed and worm-eaten timbers of an ancient pier.

In the so-called administrative block were stored some scores of beds, mattresses, blankets, and other necessaries, and a matron with two servants had been placed in charge. So prepared, Brisbane waited for plague, and not in vain it waited. Towards the end of April a suspicious case was proved to be the dread disease, and an army of workmen were sent down at once by the Government, and the erection of the wards went on apace, while a couple of small tents made of sail cloth and saplings were hastily pitched for the immediate reception of the patient and his attendants. The retained staff, which was then made up of two medical men, two nurses, two wardsmen, and a policeman, were hurriedly despatched to Colmslie, and by them the tents were thoroughly put in order.

On arrival of the patient in the morning, news was brought that the builders and labourers were meditating instant flight. Their own officials were powerless to combat the panic that had overwhelmed their people. Work was on the instant stopped, and a helter-skelter rout was about to begin, and was delayed only by the obstacle of the ambulance litter blocking the way to safety. There the litter had to stop while a medical officer addressed the fear-stricken crowd, and persuaded all but a few cravens to continue their work. As soon as the patient had been conveyed to his tent, a barrier of rope, soon replaced by barbed wire, around a space some twenty yards square, cut him off with his attendants from communication with the outer world. Yellow flags marked the cordon or plague area, which no one, without special permit, was allowed to approach.

Late in the afternoon the contacts arrived —the inmates of three houses, all of whom had in some way come in contact with the patient during his illness or the twenty-four hours that preceded it. They were brought in the plague 'bus, a vehicle of which ere long strange tales were told. On their arrival the contacts had to be stripped, bathed in antiseptics, and furnished with new clothing. After this they were supplied with hot coffee and other restoratives, and marched to a cottage which had been hastily fitted for their reception. In their light garments, or in bed, they had to remain till their clothes were disinfected and fit to wear again. Such was the rude welcome of a contact.

In town, in the meantime, determined measures were taken to confine the disease to its supposed point of origin. The house of the patient, with two others adjacent, and part of the high road between, was enclosed with a high palisading of stout posts and galvanised iron—such a paling as one sees round a racecourse or a gaol—and within this disinfection by fire and by chemicals was thoroughly carried out. Police were stationed at the various entrances, and flaring yellow placards and posters proclaimed the danger zone.

The devoted band of men who composed the cleansing gang entered ardently and with spirit into their work. At the end of the first day their thoroughness was such that they stripped off their every stitch of clothing and cast it on the burning pyre, some of them even sacrificing the paper money that their pockets contained.

The public's interest in the condition of the plague patients was from the first intense, and this was satisfied by the posting, thrice daily, a bulletin describing the patients' condition, on the door pillars of the Town Hall. Permission to visit a patient whose condition was critical it was at first impossible to grant, but as soon as arrangements could be made to allow it, it was never refused. Rarely, however, was it sought. Even then the mention of the necessary bath and change of clothing was generally enough to check the ardour of the applicant, and when the necessity and the reason of these precautionary measures was explained, it was but once or twice that the would-be visitor carried out his intention.

As case succeeded case, it was found necessary to add the suspect tents, two small tents which had been reserved for suspicious but not yet pronounced plague cases, to the plague area, and soon they, too, were filled.

Ere long the plague area grew into a fairly large encampment of about a dozen tents, and the original twenty yards square of barbed wire had become an enclosure of acres, including a stretch of grass reaching down to the river. The ancient pier was repaired, a pontoon attached, and so a landing place made for the plague boat. This was a sailing boat stripped of its masts and gear, and furnished with racks for two stretchers. In tow of a small tug it was used to bring the patients and their bearers down the river—a shorter journey since the ferries had been closed against the passage of the ambulance. It was found to answer well when the river was calm, but in rough weather its use had to be discontinued. Like other vehicles carrying the yellow flag, it used to have the river pretty much to itself, every craft that could move making way for its passage.

For visitants to the plague area; more especially members of the clergy and consultants, a triple bath was provided. By the latter it was from the first frequently used, but it was long ere one of the former profession ever passed its portals. Not even till the third funeral was one found willing to read the service over the grave. To the medical officer this was deputed among his many miscellaneous duties. The first dangerous case raised the question of place of burial, and this was decided by the Board of Health. It was not considered proper that those dead of plague should be interred in any public cemetery, and Gibson Island, a long low stretch of sand, thickly covered with mangroves, bush and trees, was chosen. Its highest point was some five feet above high water level. Its situation was some four or five miles down the river from Colmslie, well out of the navigation channel of the river. The yellow flag was hoisted there. A patch of ground on the highest part of the island was cleared by axe and fire; men were sent from the hospital to dig some six foot graves, but at a lesser depth they came to water, and there they had to stop.

When the first death did occur, the body was wrapped in antiseptic sheets, laid in the coffin, and waited the arrival of the Government steamer which was to tow it down. The space above and beside the body was filled with quicklime, the lid screwed down, and the coffin carried down to the riverside and laid in a small boat. When the steamer arrived came the first complication. It brought orders that no one from the Plague Hospital was to board it, so the medical officer and his men had either to sit in the punt with the coffin or get another boat and tow alongside. When Gibson Island was reached, only with the greatest difficulty was the coffin landed, and the sad and solemn ceremony had to be hurried through owing to the lateness of the hour. The difficulties met with induced the Government to hastily construct a landing pontoon near the island cemetery. After that, disembarkation was easy, but many a time in squally weather the boat and punt came within an ace of being swamped, and no one who had to do with Gibson Island burials but felt a sense of relief when a later order allowed of burial elsewhere.

In the plague area the strictest precautions against infection were taken. Each attendant had at first a carbolic bath twice daily as a matter of routine. When the first case with pneumonic symptoms arrived, veils of mosquito netting were used by the nurses and doctors when in the wards, and these were also worn at such times as mosquitoes were about. "*Post hoc*" and possibly "*ergo propter*," none of the attendants in these early cases received the infection. The open air life may have contributed to their excellent health.

The state of panic which I have thus shortly tried to picture was slow to pass away. It was some six weeks ere even the Colmslie servants, who had never been inside the plague area, could be seen in town without the matter being noted in the public prints, and longer than that before an inmate of the plague area was allowed even to enter the administrative block. What finally allayed the extremity of the scare was what I might call the abolition of contacts. As soon as they were no longer kept apart and considered dangerous, the thick edge of the quarantine wedge was loosened and its withdrawal was rapid. Senseless panic was soon replaced by a wholesome but not unreasonable fear of infection—a fear which, while it lasted, was productive of good results; for it aided and abetted the carry-out of cleansing and purifying municipal measures which then, as now, were recognised to be the first weapon in the war against the fell disease.

(Read before the Brisbane Branch of the British Medical Association.)

Charitable Bequests and Donations.—The managers of the Alfred Hospital, Melbourne, have received a further instalment of £250, making £500 in all, out of the estate of the late R. J. Loudon. A cheque for £22 0s 4d has also been received from the National Executors and Agency Company out of the estate of the late John Connors, of Dover-street, Richmond.

EUCALYPTUS OIL IN THE TREATMENT OF TYPHOID FEVER.

By Cuthbert Hall, M.D., Ch.M. (Syd.), Parramatta, N.S.W.

The methods of treatment employed for typhoid fever, even during the last 50 years, have been many and various. Time after time some new remedy has been tried, on the recommendation of some eminent authority, and, after a brief period of favour, during which glowing reports were published of its efficacy, it has been abandoned, wholly or partially. For many of these it was claimed that they shortened the duration and decreased the severity of the disease; but experience has shown that that claim could not be substantiated. None of them have proved entirely satisfactory.

Besides the general management and nursing, the present day methods of treating typhoid fever are comprised under (*a*) diet; (*b*) hydrotherapy; (*c*) medicinal treatment, including (1) antiseptic medication, (2) eliminative and antiseptic medication, (3) antipyretic medication; (*d*) serum-therapy, and (*e*) organo-therapy.

Of the last-named, I will treat later on. Serum-therapy, ideal method though it be, if it could only be applied to abort the disease, has not as yet been used with any degree of success.

When first introduced into practice, extravagant claims were made on behalf of the coal-tar antipyretics, such as antipyrin, antifebrin, and phenacetin. Soon, however, it was found that although they reduced the temperature, yet they did not shorten the duration of the disease, and moreover, they, in many cases, produced dangerous collapse. Hence their use has been, to a great extent, abandoned.

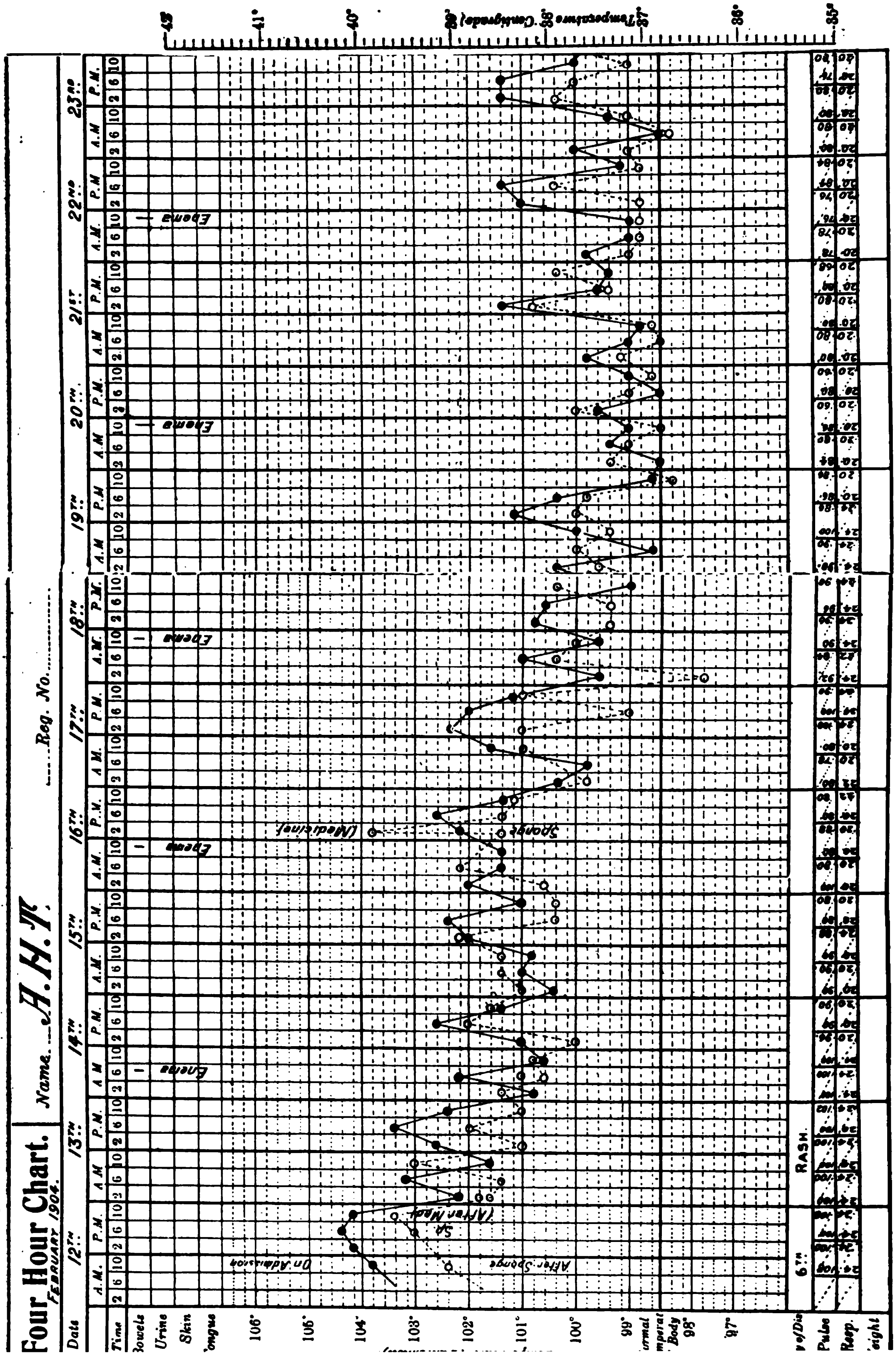
The antiseptic treatment of typhoid fever naturally followed on the discovery of the bacillary origin of the disease. Hence such drugs as chlorine, carbolic acid, mercurials, β. naphthol, iodine, guaiacol, peroxide of hydrogen, salol, etc., have had an extensive vogue. But when we consider the chemical transformations many of these undergo in the stomach and upper bowel, the fact that they are mostly absorbed before they reach the ileum, and the extreme degree of dilution in which they must be present in the bowel from the necessarily small doses employed, we see that the chances are greatly against their having much, if any, effect on bacilli in the intestinal lesions. The utmost that can be claimed for them is that they inhibit bacterial growth in the intestinal contents, and thus prevent absorption of the products of such growth. On the bacilli in the blood and internal organs they do not seem to have any effect.

At the present time hydrotherapy is the treatment most in favour, whether applied in the form of cold bath, cold sponging, or cold packs. The cold bath, though very efficacious, is cumbersome, and entails a great amount of work, even in a hospital. Osler[1] says: Two advantages are claimed for hydrotherapy in typhoid fever—a mitigation of the general symptoms of the disease and a reduction of mortality. . . . The beneficial action is not so much special and tonic as general antipyretic and roborant. Osler, while declaring his intention of continuing the treatment, prays for one which, "while equally life-saving, may be, to put it mildly, less disagreeable."

Short, then, of being able to check the disease in its first stage, the drug which is likely to be most effectual in the treatment of typhoid fever must possess the power of reducing the temperature, of acting as an antiseptic, and of producing a tonic effect on the heart and system generally. These indications are fulfilled to a marked degree by eucalyptus oil.

The eucalyptus oils found generally on the market contain, as their main ingredients, eucalyptol, and the terpenes, which comprise dextro- and lævo-pinene (the constituents of ordinary turpentine oil), and the sesquiterpene. In some oils the place of eucalyptol is taken by piperitone, the peppermint constituent, and the pinene is replaced by phellandrene. In the investigation which I recently carried out as to the bactericidal power of the oils and their constituents, I proved that the bactericidal power of eucalyptol has been greatly exaggerated—in fact, when pure, its action in this respect is very weak. Piperitone and the terpenes have a much more powerful action as bactericides, while, if the oil is to have a particularly powerful bactericidal effect, it must have a sufficiency of ozone, derived from oxidation of the terpenes. If one is not sure that the brand of oil he is using contains much ozone, this may be made up for by prescribing a little peroxide of hydrogen along with the oil.

The oil which I employed for most of my cases was that of Eucalyptus Smithii, which



TEMPERATURE CHART TO ILLUSTRATE DR. CUTHBERT HALL'S PAPER ON "EUCALYPTUS OIL IN THE TREATMENT OF TYPHOID FEVER."

consists mainly of eucalyptol and pinene, and I had it "ozonized" by exposing it to the action of light and air for a month before use. The antiseptic effect was seen in the altered appearance and diminished fœtor of the stools, such as we are accustomed to see during the administration of other antiseptics.

Action on Temperature.—Numerous experiments have been made by German investigators to demonstrate the reduction of temperature brought about by eucalyptus oil. Siegen[2] took 100 drops of eucalyptol (which as prepared at that time was practically identical with the oil as refined nowadays, and so was far from being pure cineol), in divided doses between 1.45 p.m. and 6 p.m., and found his temperature 0.6° C. below his normal evening temperature. He found that large doses (2 to 4 grm.) of quinine had no such effect on the normal temperature. Schulz[3] found the ozonized oil produced a reduction in the temperature, both normal and febrile, of rabbits.

In my cases of typhoid, the effect of the oil in the reduction of temperature was surprising. For adults, I employed 10 minim doses, suspended in mucilage, and given every four hours. Of course, larger doses could be tolerated, but care must then be taken lest acute nephritis be set up by the terpene constituents of the oil. The temperature was taken again half an hour after each dose, so as to ascertain its effect. Besides the general lowering effect on the height of the temperature curve, I find that each individual dose produced an average reduction of about 0.5° F.

If the temperature be taken every 10 minutes for an hour after a dose, there will generally be noticed a slight rise at first, followed by a decided fall, sometimes amounting to 1° F., or even more. The reduction in the temperature would seem to be brought about as follows: The heart is stimulated reflexly when the drug enters the stomach, and then directly when it enters the circulation. The heart beats more rapidly and strongly, the blood pressure is raised, and there is a dilatation of the vessels of the skin, causing a flushing such as is seen after a full dose of alcohol or camphor. This access of fever-heated blood to the peripheral vessels causes the initial slight rise of the temperature usually seen. This determination of blood to the skin helps to cool it. But the cooling is mainly due to the gentle perspiration into which the patient almost invariably breaks, and which may continue for more than an hour or two. The hot, dry skin is replaced by a cooler, moist one. This diaphoretic effect of eucalyptus oil I do not find mentioned in any of the text-books. The great advantage of this is that it is a diaphoresis combined with stimulation and free from any depression. It would seem that eucalyptus oil reduces temperature, mainly by increasing heat loss.

My orders were that if the temperature failed to come below 103° F. after each dose the patient was to be sponged, but so rarely did this happen that sponging had only to be resorted to about a dozen times in all my 14 cases. The saving of labour that this meant to the nursing staff of the hospital was very great, and only for it an extra nurse would have had to be employed during the typhoid epidemic at Parramatta. The nursing staff of the Parramatta Hospital were very enthusiastic as to the favourable course which these cases generally ran, as their labours were so greatly lightened.

Nervous System.—In very large doses eucalyptus oil acts as a profound depressant to the central nervous sytem. Binz and his pupils found that many volatile oils, such as oil of valerian, oil of turpentine, oil of eucalyptus, etc., possessed the power of antagonising the effects of certain convulsants, such as brucine, strychnine, etc., so that a dose, otherwise lethal, was not able to cause death if one of these oils was injected at the same time. In my cases I found a marked absence of delirium, even when such had existed previous to the beginning of the treatment. This result could be attributed mainly to a reduction of the temperature, but probably also to a sedative effect on the central nervous system.

Hæmorrhage.—Only one case, a child of eight years, had any hæmorrhage, and that was only a small one. This freedom from hæmorrhage is what one would expect, considering that 10 to 20 per cent. of the oil is made up of terpenes with their well-known styptic properties.

Heart and Pulse.—Graves, and later H. C. Wood, strongly recommended oil of turpentine as a stimulant in typhoid fever. Eucalyptus oil is also a very efficient stimulant, and its effect on the pulse was very noticeable. In none of the patients was a well-marked dicrotic pulse developed. In consequence of this, alcoholic stimulants were little needed for any of the patients, though four or five of them had stimulants two or three times a day to tide them over the worst of the attack.

Of the 14 cases, only one died, and her attack was complicated by a severe attack of broncho-pneumonia, to which she succumbed on the eleventh day of the disease. Of course, with a disease like typhoid, one does not attempt to base any statistics on such a small number of cases. The convalescence of all the other cases was rapid and complete; none of them suffered from that profound debility so often seen after the fever.

Dr. Raymond Carpenter has recently published a paper in which he argues that the long duration and severity of typhoid is due to the absence of a leucocytosis, owing to the implication of the spleen. For this reason he advocates the use of spleen extract in treating the fever in order to produce a leucocytosis. He says that he has treated several cases successfully by this means. I have at present another case of typhoid which I am treating with eucalyptus, and which is running a mild and favourable course. On the eighteenth day of the disease I made a leucocyte count and found it to be 10,600. From this it would appear that the oil has probably no power in producing a leucocytosis in typhoid fever.

I append in tabular form a brief description of the cases and also the temperature chart of one patient whose temperature reacted well to the drug. It will be seen that after his first day in hospital he only needed to be sponged once. The dotted lines mark the temperature recorded half an hour after each dose.

In conclusion, after what has been shown of the diaphoretic and antipyretic effects of eucalyptus oil, combined at the same time with a stimulant and tonic effect, I hope that others may be led to try this valuable remedy, which hitherto has been little used in typhoid fever. If the labour and disagreeableness of hydrotherapy can be avoided to a great extent or altogether, surely it is worthy of extensive use, and may yet prove a good substitute for continuous hydrotherapy.

CASES OF TYPHOID FEVER TREATED WITH EUCALYPTUS OIL.

Case.	Age.	Sex.	Duration of fever.	Dose Ol. Euc.	Spleen.	Rash.	Stools.	Complications.	Widal's Reaction.	Remarks.
I.—L.B.	13 yrs.	F.	4 weeks	mX.	enlarged	present	typical			
II.—D.G.	7 yrs.	F.	8 weeks	mV.	enlarged	present	typical	slight bronchitis		Relapse
III.—G.C.	4 yrs.	M.	4 weeks	mIV.	enlarged	present	typical	severe bronchitis	+	
IV.—A.C.	7 yrs.	M.	4 weeks	mV.—mX.	enlarged	present	typical		+	
V.—A.K.	4 yrs.	F.	11 days	mIV.	enlarged	present	typical	severe broncho-pneumonia		Died on 11th day
VI.—F.E.	28 yrs.	M.	17 days	mX.	slightly enlarged	nil	typical		+	
VII.—M.R.	25 yrs.	F.	20 days	mX.	slightly enlarged	few spots	typical		+	
VIII.—G.T.	24 yrs.	F.	20 days	mX.	enlarged	present	dark			
IX.—A.T.	24 yrs.	M.	4 weeks	mX.	enlarged	present	typical			
X.—M.A.	12 yrs.	F.	22 days	mX.	enlarged	present	typical			
XI.—F.C.	8 yrs.	M.	20 days	mVI.	enlarged	nil	typical	slight hæmorrhage		
XII.—E.C.	12 yrs.	M.	17 days	mVII.	enlarged	few spots	typical		+	
XIII.—M.G.	31 yrs.	F.	33 days	mX.	enlarged	present	typical			
XIV.—M.J.	42 yrs.	F.	21 days	mX.	slightly enlarged	slight	typical		+	Short recrudescence in fifth week.

REFERENCES.—(1) Johns Hopkins Hospital Reports, vol. v. (2) Quoted in "Das Eucalyptusöl," by Hugo Schulz, Bonn, 1881. (3) "Das Eucalyptusöl," p. 56.

(Read before the New South Wales Branch of the British Medical Association.)

Medical Examination of Pilots.—As stated in our last issue, new regulations have been passed under the provisions of the New South Wales Navigation Act, 1901, providing for the periodical examination of the pilots by a competent medical board. In a recent issue of the *Government Gazette* it is notified that the latter is to consist of Dr. Ashburton Thompson (Chief Medical Officer of the Government), Sir Normand MacLaurin, M.D., M.L.C., and Dr. F. Antill Pockley (oculist).

ANTIPHLOGISTINE.—This preparation has now been extensively used, and well spoken of generally by the profession in Australia. Any medical man who has not used it can obtain a small specimen package free on application to the Australasian Branch of the Denver Chemical Manufacturing Company, Gibbs' Chambers, Moore-street, Sydney.

NOTES ON A CASE OF PERFORATED GASTRIC ULCER.

By H. Simpson Newland, M.B., M.S., F.R.C.S. (Eng.), Adelaide.

The notes of this case are as follows:—

R. F., aged 43, unmarried, a lady's companion, consulted Dr. Marten on February 2nd, when she complained of severe pain in the abdomen, back, and left side. She had suffered from pain for six weeks. It was usually absent on waking, but increased in intensity as the day went on. No relation had been noticed between the pain and the taking of food. Nausea was present at times, but vomiting never occurred. Tenderness had been present for some weeks over the upper part of the abdomen. The bowels acted naturally. Menstruation was regular. In her occupation as lady's companion she had frequently to lift a heavy invalid. Dr. Marten advised her to give up her employment and to rest for a time.

On the following night (February 3rd), between 10 and 11 o'clock, about 10 minutes after lifting her patient, and while dressing her own hair, she was seized with sudden intense pain in the abdomen. She walked with great difficulty to the door of her room and called for help. The pain was continuous, with paroxysmal increase at frequent intervals. She did not vomit. No food had been taken since dinner, four hours before her seizure. Dr. Henry Giles saw the patient at midnight. She was then in very great pain. The temperature was 98 and the pulse 84, regular and soft. There was no collapse. Great pain was complained of above the umbilicus, and the abdomen was intensely tender in this situation. Morphia, gr. ¼, was injected hyperdermically and hot applications were ordered to be applied to the abdomen.

Dr. Giles saw her again at about nine o'clock next morning. The pain had continued throughout the night. At 8 a.m. she had vomited a quantity of greenish fluid. The pulse was 94 and the temperature 99·4. Great pain and tenderness still persisted in the upper abdomen. At noon the pulse was 100 and the temperature 100·4; vomiting had occurred twice since the morning visit. The pain and tenderness were now rather more diffused, and there was slight distension of the abdomen. Not deeming her condition satisfactory, Dr. Marten was asked by Dr. Giles to see the patient. He examined the patient between four and five o'clock, p.m. She was still in great pain. The pulse was 120. The abdomen was a little full and moved badly. Rigidity and tenderness were general, but much more marked above the level of the umbilicus. The liver dulness was obliterated. Dr. Marten diagnosed a probable perforated gastric ulcer. The patient was therefore removed to a private hospital, where I saw her at 7.30 that evening. The physical signs were identical with those met with by Dr. Marten. The pulse, however, was 108, or twelve beats slower. There was no dulness in the flanks. Peritoneal friction could be felt with the hand and heard with the stethoscope above and to the right of the umbilicus. I concurred in the diagnosis of perforated gastric ulcer. From the fact of the pulse having dropped from 120 to 108, notwithstanding a drive of seven miles over a rough road, I was of opinion that the perforation was probably a small one and undergoing spontaneous closure. However, on the principle that it is better to be sure than sorry, it was agreed that operation was imperative. February 4th.—At Dr. Marten's request I opened the abdomen above the umbilicus half an hour later, Dr. Gerald Hayward having administered nitrous oxide and ether. A small quantity of gas escaped on incising the peritoneum. No free fluid and no food were encountered in the peritoneal cavity. The liver was lower than usual, and it was the rubbing of the inflamed peritoneal surfaces of the liver and anterior abdominal wall which gave rise to the friction that was felt. The stomach was distended with gas and lay well under the liver. This was drawn up and the stomach examined. The anterior surface of the pylorus and first portion of the duodenum were coated with a thick layer of lymph. The actual perforation was not at first obvious. But in brushing the lymph away gently with a swab, gas escaped with a shrill piping noise and directed the attention to a pin hole perforation in the anterior surface of the stomach close to the pylorus. This was closed with a single layer of interrupted Lembert sutures of silk, inserted at right angles to the axis of the pylorus in order to prevent subsequent stenosis. The area around the perforation was gently swabbed with hot sterile saline solution, and the abdomen closed in layers.

After treatment.—The patient bore the operation well. The pulse gradually fell during the night to 102 at 6 a.m. Post anæsthetic vomiting was a little troublesome. Two and a half hours sleep were secured without morphia. At noon on February 5th the patient vomited some greenish fluid. As the pain was then very severe and as her general condition was quite satisfactory, morphia, gr. $\frac{1}{8}$, was administered. She spent a good night, and next day (February 6th) feeding by the mouth was begun. Hitherto she had only had sips of hot water. As the food seemed to induce retching it was discontinued in favour of rectal feeding, but was resumed on the following day. The patient continued to make a steady recovery. Most of the stitches were removed on the tenth day and the remainder a few days later. The diet was augmented day by day until her discharge from the hospital on March 2nd, when she was able to eat her usual food.

I would like to call attention to the following points:—

1. The presence of peritoneal friction.
2. The absence of liver dulness. (Pearson has shown what a variable sign this is.)
3. The shrill sound due to the escape of gas through a tiny vent.
4. The clinical and pathological signs of the tendency to spontaneous recovery.
5. Absence of collapse at the onset.

It will be seen that the case was a very favourable one for operation. Provided that an early diagnosis be made, recovery should always follow operation in such cases.

(Read before the South Australian Branch of the British Medical Association.)

SPONTANEOUS RECOVERY FROM CEREBRAL TUMOUR.

By George E. Rennie, M.D., M.R.C.P., (Lond.), Assistant Physician, Royal Prince Alfred Hospital, and Tutor in Medicine, University of Sydney.

In selecting the above title for this communication I am making two definite statements which in my opinion are supported by the evidence I shall adduce—first, that the patient had a cerebral tumour; and second, that he has practically recovered from his disease independently of any therapeutic measures.

The patient, A. J., is a single man, now aged 31 years, a ship steward by occupation. He first came under my observation on June 17th, 1901; he was brought to my rooms direct from a steamer on arrival from Melbourne.

The history I then elicited showed that he had previously been a fairly healthy man until about March of that year. He had had a slight attack of gonorrhœa some five or six years previously, but no chancres, and no history of any manifestations of syphilis. He had been occasionally the worse for drink, but was not a regular heavy drinker. Two years previous to his first visit to me he had fallen down on to his head from a height of twelve feet. He was stunned, but not apparently much injured, and speedily made a good recovery, and did not suffer from any symptoms whatever referable to this accident. About March, 1901, he began to suffer from severe occipital headaches, and got weak and staggering on his feet. He was admitted to the Melbourne Hospital on April 23rd of that same year, and the following are the notes of his condition and treatment while in that institution:—

A. J., admitted 23-4-01, complains of headache and some difficulty in walking and speaking. Ill a fortnight; headache occipital and some tenderness in this region; pupils dilated; right slightly larger; reaction to light sluggish; some diplopia; no vomiting; no alteration of sensation; knee jerks excessive; no ankle clonus; no syphilitic history obtained. Put on pot. iod., gr. 10. Two years ago fell upon his head directly from a height of twelve feet and was unconscious six hours; scalp wound visible.

24-6-01.—Has some dysphagia; eyes react well to accommodation, but not to light. There is general tenderness of scalp, especially marked over occipital region. Sways in walking, but has no tendency to fall in any particular direction.

25-4-01. — Eyes examined ophthalmoscopically; early optic neuritis in both eyes, more in left.

4-5-01.—No reaction of pupils to light or accommodation.

29-5-01.—Transferred to surgical side. Trephined over left parietal bone. No excess of fluid obtained in left ventricle.

12-6-01.—Headache much relieved. Speech thicker; sight not improved; vision about same. Walking not so good as it was; no giddiness. Still dysphagia; excessive salivation present; cannot stand alone; knee-jerks more markedly increased.

The following are the notes I took of his condition when I first saw him. He is fairly well nourished, but has been losing weight recently. He talks in rather a maudlin fashion as if worse for drink, but he is really perfectly sober. His articulation is thick, and saliva is constantly dribbling from the mouth. He does not complain of much pain in the head, and is able to sleep for three or four hours at a time. His sense of smell and hearing are normal. His sight is not very good, but he can see to read. He has slight ptosis of both eyelids; the pupils are unequal, the left larger than the right; there is no reaction to light or on convergence. The movements of the eyeballs both upwards and downwards are defective; lateral movements are good, but with some coarse nystagmus, and some divergence of the visual axes; optic neuritic was present in both eyes. There is some slight facial paresis on the left side. He can close the mouth, but only feebly, and his tongue can only be protruded a short distance. He can manage to drink, but can only swallow solids with great difficulty. He has no sign of disturbance of sensation in any form. The muscular power in the legs is feeble, and he can only walk or stand with assistance. His knee-jerks are active; there is no ankle clonus, and his plantar reflex shows well marked extensor response on both sides. There is no sphincter affection. His temperature is normal; pulse is 100; heart shows no lesion. Urine normal.

The opinion I then formed of him was that he was suffering from a tumour at the base of the brain, causing his bulbar symptoms, and pressing on his pyramidal tracts. In view of the suggestive nature of his symptoms, and the possibility of a syphilitic infection, I ordered him potassium iodide, grains 20, with liquor hydrag. perchlor. half dram ter die. The administration of this medicine was, however, only continued for a very short time, since it appeared to make his headache much worse, and certainly while he was taking it he progressed steadily downwards. I saw him again about three weeks later, and all his symptoms had become aggravated. At the end of August he grew rapidly worse, his headache became much more intense, he was unable to sit up at all, and there was a great increase in the weakness of the legs and in the right arm. He took very little food. and was more or less unconscious at intervals. I ordered him some morphia for the intense head pain, and was daily expecting to hear of his death. He, however, remained in this condition for several weeks, and was most skilfully nursed by his sister and brother-in-law, who managed to keep him from getting any bedsores, although he was unable to sit up at all, and had lost all control over his sphincters. Gradually the head pain eased off, and on November 9th he was able to be propped up in bed with difficulty to see the Balmain Regatta. Although this effort seemed to exhaust him at the time, yet he began from this time to improve slowly. I saw him again about two weeks later, and was surprised to see the change in him for the better. By Christmas day he was so much better that he was able to sit up to dinner, and with difficulty was able to feed himself, though he was quite unable to use a knife. Two weeks after Christmas he was able to take hold of a tumbler of water and take a drink without spilling it, using his left hand. His right arm and leg gradually gained strength and the muscles became firm. The pain in the head shifted about from one part of the head to another, and at times almost disappeared, but whenever he sat up it seemed to return. From this time he has been steadily but slowly improving until he has reached his present condition. Since April 26th of this year he has been doing light work, and his only disability is unsteadiness on his feet, and his right arm does not feel so strong as his left. He is now well nourished; has no headache or pains anywhere; sleeps well; his speech is now quite natural, and he has no difficulty in swallowing his food. His sight is good; he can read perfectly well; but has occasional diplopia on looking to the left. He has still a little facial inequality, but the tongue is protruded in the middle line. There is no anæsthesia anywhere; his deep reflexes are active, but there is no ankle clonus. Babinski reflex on the right side, not on the left. There is no sphincter trouble now.

The only treatment he has had (with the exception of the trephining in Melbourne, which was evidently only intended as a palliative measure) was the administration of the potassium iodide and perchloride of mercury on one occasion for about a fortnight, and again some months later for three or four days; on each occasion this was accompanied by an increase in the headache, and certainly did not appear to have the slightest beneficial effect. The change in his condition is so remarkable that one could hardly believe it if one had not seen it and watched his recovery, and under these circumstances one might perhaps be tempted to doubt the diagnosis of cerebral neoplasm.

To review briefly the symptoms and progress of the case, we have a man who very gradually began to have severe headaches at the back of the head, accompanied by progressive unsteadiness and weakness in the legs, then the onset of ocular symptoms, with optic neuritis, and then further symptoms of bulbar paralysis; a gradual progress in the intensity of the headache and in the paralytic symptoms until he became quite helpless, unable to sit up, or to do any thing for himself; then a gradual disappearance of his general and special symptoms, until at the present time he has practically very few signs of cerebral disease, these being only slight but definite ones of some degeneration in his pyramidal tract. The onset and progress of his symptoms are quite those of a chronic progressive lesion, and not those of a vascular or inflammatory lesion, and I think we are forced to conclude that he did have a neoplasm of some kind at the base of the brain.

As to the probable nature of this tumour, it is impossible to dogmatise. One thinks of syphilis, tubercle, or some benign growth, possibly cystic in nature. There is no doubt that the clinical picture of the disease at first is strongly suggestive of syphilis. But against this, although not, of course, definitely excluding it, are the facts that he has never had any manifestation of syphilis, although the possibility of infection is not denied, and that under anti-syphilitic treatment he got definitely worse, and his head pains were certainly not relieved in the least, but rather made worse, so much so that it was necessary to abandon the treatment. As regards tubercle, there is absolutely nothing in favour of his disease being of this nature. There is no history of any tuberculosis in his family, and he himself has never suffered from any manifestations of tuberculosis elsewhere. We know, of course, that tubercular tumours may exist in the brain, and give rise to the classical symptoms of cerebral neoplasm, and then all these symptoms disappear owing to the tumour ceasing to extend, and undergoing calcification. The same may be true of cystic disease, but cysts are either simple, not growing at the base of the brain, but in the cerebral hemispheres or in the cerebellum; or else the cysts are developed in connection with gliomatous or sarcomatous tumours in the cerebellum or in the pons and medulla, and then rapidly cause death. Whichever view we adopt we are faced with some difficulties; but personally I am on the whole disposed to think that he had syphilitic disease of the pons, probably a gumma, which has been slowly absorbed, although, if this be the case, the result is a most unusual one, seeing that he had so little anti-syphilitic treatment.

In connection with this case it is interesting to know that the late Dr. Bristow recorded three cases of recovery from symptoms pointing to the presence of progressive organic cerebral disease, two of which, he says, impressed him greatly, because from their symptoms and progress he had gradually been confirmed in the belief that they were hopeless, when amendment took place, and before long the patients were restored to health. In these cases the diagnosis lay between tubercular tumour and syphilis, but recovery took place without any very definite treatment except morphia to relieve pain, and tonics.

(Read before the New South Wales Branch of the British Medical Association.)

A CASE OF DISSEMINATED SCLEROSIS OF CONGENITAL ORIGIN.

By J. M. Gill, M.D. (Syd.), Hon. Physician and Pathologist, Royal Alexandra Hospital for Children, Sydney.

THE child I have shown you to-night is a girl ten years of age. The parents have given me the following particulars of her history. She appeared to be healthy at birth, but did not learn to walk till one and a half years, and when she did, her legs were stiff. She could walk with a shuffle up to five or six years. The heels became drawn up (talipes equinus) at four years. Her speech has always been of the same character; the tremor of the hands has always been noticeable.

The family history is as follows:—The father is 43 years of age; the mother is about five months younger; both are healthy and temperate. There was but one other child of the marriage, who died at nine months of bronchitis; otherwise she seemed healthy. The mother has had no miscarriages.

On examination there is a general spastic condition of both lower limbs, without any more wasting of the muscles than can be accounted for by the want of use. When lying down the feet are in a position of talipes equinus, with slight tendency to varus, and hyper-extension of each great toe. The right foot can be flexed to a right angle by gentle pressure, the left foot not quite so far. She can walk with assistance, both feet being in a marked position of talipes equino-varus. She walks placing one foot slowly down in front of the other. The knee-jerks are increased; patellar clonus and ankle clonus are present on each side. The plantar reflex is of the extensor type. The legs are kept extended at the knee-joint, although they can be fully flexed on the thigh with ease. Sensation is normal in all forms. She has full control over the bladder and the rectum. There is no rigidity of the arms, and no tremor of the fingers when at rest; but when she uses her hands, *e.g.*, to raise a cup of water to her lips, a coarse, irregular, jerky tremor at once occurs. It is accentuated by any circumstance that causes emotion. She can write with a pencil, steadily pressing on the point; the letters are formed with difficulty as one might expect. There are curious slow nodding movements of the head, but these are not always present. The speech is deliberate and slow, of a well marked " syllabic " character. Her mental faculties are fairly well developed. She attends school and can read and write. There are no signs of congenital syphilis. There is no curvature of the spine. I should have mentioned before that the muscular power in the hands and arms is fairly good. The elbow and wrist jerks can be obtained, but are not exaggerated.

Dr. Gordon MacLeod has kindly examined the eyes for me and reports as follows:—There is marked lateral nystagmus aggravated on attempting fixation; the pupils are equal, and the reaction to light and accommodation is normal. She is highly myopic and astigmatic; but correction does not improve the vision beyond 6/60 in each eye. The fields are full; the colour vision is good. There is no paralysis of extrinsic muscles. On ophthalmoscopic examination the discs are not atrophic in appearance; well marked myopic crescents are present.

Remarks.—This case conforms to the classical type of disseminated sclerosis. Such cases have been previously recorded in quite young children, and although doubt has been thrown on the accuracy of the diagnosis in some of these, there can hardly be any question that the diagnosis has been correct in others. With regard to the diagnosis in this case, Friedreich's disease may be excluded by the absence of ataxia and the presence of exaggerated knee-jerks; hereditary cerebellar ataxy, by the age of the patient (the earliest recorded case being in a patient 18 years of age), and again by the absence of ataxy. On the other hand, Strümpell has recorded three cases presenting some of the classical symptoms of disseminated sclerosis in which post-mortem scattered sclerotic patches were not found. We know that defective development in the lateral columns occurs not infrequently. It is quite reasonable to suppose that, in addition to the lateral columns, such defective development may occur in scattered patches throughout the nervous system.

(Read before the New South Wales Branch of the British Medical Association.)

A LARGE VENTRAL HERNIA.

By R. E. Weigall, M.B. (Melb.), Melbourne.

In March of this year I saw Mrs. S., *æt.* 42; has two children, youngest 13 years old. She gave me the following history:—Four years previously she was operated upon by an eminent Melbourne surgeon for a ruptured tubal pregnancy. She was evidently *in extremis* when operated upon, and little preparation was possible. A very large central incision was made, and the operation hurriedly finished. The wound suppurated. Almost immediately on getting about, a tumour appeared under the scar, which has increased to its present enormous size. All sorts of mechanical contrivances have been used unsuccessfully, and the tumour has become a burthen to the patient's existence.

On examination, I found a broad scar, which had extended from the pubes to above the umbilicus. An immense hernia presented itself through an opening in the abdominal wall, hanging over the pubes between the thighs. The hernia measured 15 inches when the patient was in the erect position, 15 inches in lateral diameter, and 18 inches in antero-posterior diameter. The hernial ring was very distinct, and about 9 inches in diameter. A good muscular ring evidently existed, and the general muscular development was good, although the patient was very stout. The intestines could be clearly outlined by palpation in the sac, and could be easily returned into the sac. I realised that the sac and intestines were intimately adherent; but was encouraged to operate by the hope that I had good muscular walls to deal with when exposed.

Early in April I operated. I first made a central incision right over the whole length of the hernia, and dissected skin from the sac. I followed this up by dissecting all round the neck of the sac on the muscles, carefully cleaning away all fat and extraneous tissue till I had exposed both aponeurosis and muscles all round the ring. I spent nearly an hour over this process. I then opened the sac, which was very thick, and found, as I supposed, that it and the intestines were so hopelessly adherent as to be impossible of separation. I removed some portion only of the sac, and returned the remainder into the abdominal cavity. I then removed an immense amount of skin covering. I found that I could then draw the recti muscles together. I made no attempt at closing the peritoneum, but inserted six strong silver-wire sutures through all the other tissues. These I left loose till the end of the operation. I next drew together the recti muscles and aponeurosis with about 12 interrupted strong silk sutures, following this up with about 30 finer silk sutures through aponeurosis alone, till I had the parts absolutely in apposition the whole length of the incision. I then drew together the deep silver sutures, and finished off with some superficial skin sutures.

For some days the patient suffered some respiratory difficulty, evidently caused by the abdominal tension through replacing the intestines, which had been so long out of her abdomen. Apart from this she had not a bad symptom. The bowels acted almost naturally at the end of 24 hours, and everything united beautifully. She has now got as strong an abdominal wall as she ever had. She has been carefully examined by several surgeons, who tell me they regard the result as excellent. She tells me herself she can hardly realise her own condition after four years of such suffering.

(**Read before the Victorian Branch of the British Medical Association.**)

The value of the Haab electro-magnet, **imported from America about 18 months ago at considerable expense by the Melbourne Eye and Ear Hospital, for the purpose of removing pieces of metal deeply embedded in the eye, has been proved on several occasions at the hospital; and so impressed are the Railway Commissioners with its importance, from a railway employees' point of view, that they have signified their intention of donating £5 to the funds of the institution.**

SUCCESSFUL CÆSAREAN SECTION.

By Alfred Sutton, M.R.C.S., etc., Hon. Physician Lady Bowen Lying-in Hospital, Brisbane.

Mrs. S., aged 35, was admitted to the Lady Bowen Lying-in Hospital on July 22nd, 1904, at about full term with her sixth pregnancy. She was married in 1892, aged 23, and in December, 1893, was delivered with forceps, after very prolonged labour, of a living male child, which still lives. In May, 1895, she was delivered by craniotomy. In November, 1896, she was delivered, with difficulty, of a dead child, by forceps. In February, 1898, labour was induced at the seventh month, and the child is still living. In 1901, labour was induced at the seventh month, the child living for a few hours.

She was urged, if pregnancy occurred again, to apply for treatment at the seventh month; but, owing to miscalculation, she came to the Lady Bowen Hospital when near her full term. The mental condition of the patient caused much alarm, it becoming almost maniacal at night. The question of method of delivery gave much concern, and it was decided that the chance for the mother would be equally good after Cæsarean section as after craniotomy, especially as the child's head was only just within reach of the examining finger. Temperature, normal; pulse, 112; diagonal conjugate, 10 centimetres. Dr. Hopkins and Dr. Carvosso were asked and kindly consented to assist.

The patient having been prepared, and ether having been administered by Dr. Brockway, an incision of 7½ inches was made, beginning well above and passing through the umbilicus. The placenta was felt for, and its position avoided. An incision of six inches was made through the uterine wall towards the cervical end of the uterus. A copious discharge of liquor amnii and blood occurred; the child's feet were seized, and the infant, howling lustily, was extracted, a momentary difficulty being experienced in the extraction of the head. Contraction of the uterine muscle occurred at once, and the hæmorrhage ceased. The placenta and membranes peeled away easily, and the uterus further contracted vigorously, care being taken to prevent the entrance of any uterine contents into the abdominal cavity. The uterus was sponged out with $\frac{1}{1000}$ sublimate solution. About eight deep and a few superficial silk sutures were used for the uterus, the peritoneum being closed by one continuous silk suture, and the abdominal incision by deep silkworm gut interrupted sutures and superficial horsehair stitches.

The patient bore the operation well, the pulse being of about the same value as at its commencement.

The after history was uneventful; the usual amount of anxiety was experienced for two or three days, during which the after pains were severe; the bowels were opened early by mag. sulph., and on August 9th the temperature had become normal, and the pulse 88. The child, a healthy boy, was placed to the breast on August 1st. Much credit is due to the matron, Miss Brown, and to Nurses Grayson and Birkley for their unremitting and enthusiastic care of the patient.

(Read before the Queensland Branch of the British Medical Association.)

A SUCCESSFUL CASE OF CÆSAREAN SECTION.

By Robert Pulleine, M.B. (Syd.), Gympie, Q., late House Surgeon and Physician Royal Prince Alfred Hospital, Sydney.

MRS. B. *æt.* 38, had been married nine years. On July 20th, 1897, pregnancy was terminated accidentally at eight months, and craniotomy was performed. On September 19th, 1898, labour was induced at eight months; a female child was delivered alive with fractured clavicle and various injuries to head, but still survives. On December 14th, 1899, she was attended by me for first time. I induced labour at eight months by Champetier's bag. Delivery was difficult; bones uninjured. The child survived 15 weeks. On October 4th, 1902, I induced labour at 7½ months by Champetier's bag. The arm presented, so I performed version; the child was stillborn. On June 19th, 1904, Cæsarean section was performed one week before term; a male child was born uninjured, and survives. The patient is a spare woman, with a small, round pelvis, the conjugate diameter being rather less than 3⅓ inches. Owing to repeated disappointment in childbearing, with induced labour, and the great constitutional disturbances which followed these labours, she chose on the present occasion to undergo the operation, and have a living child at full time. The expected day was June 26th. It was decided to operate on the 19th.

Operation.—The operation was performed in a private house, and the room prepared by washing down the walls and then sponging them with 1 in 30 carbolic lotion. Dr. J. P. Ryan administered chloroform, and Dr. J. L. Cuppaidge assisted. An incision six inches long was made in the parietes. On the exposed uterus a leaden ring oval, with a long diameter of 4½ inches, was laid, and firmly pressed down. The uterine incision was made inside this through its whole length. The bleeding from sinuses was not severe, and could be controlled by pressure forceps. When the membranes bulged into the wound, it was enlarged by scissors before removing the ring. The ring being then removed, the uterine wall on each side was held to the body wall on each side by operator and assistant, and the uterine wound completed with scissors. The membranes were then ruptured, and the child delivered by catching hold of a knee. The cord was clamped with forceps, and divided. The uterus promptly contracted. The placenta on the posterior wall was promptly peeled off and delivered. A coil of bowel, with some omentum, prolapsed into the uterus and were replaced.

The uterus being freed of clots, was brought out of the abdominal wound, and a large sponge placed behind it. It had contracted firmly, and the edges of the wound were held in apposition to control hæmorrhage, which was not alarming. The escape of blood from the vagina showed the patency of the cervix. The middle stitch of strong silk was entered through all coats, except the mucosa, and tied. The wall was over two inches thick, and about twelve more sutures were entered above and below the middle one, the depth at which they were passed having to be guessed at. An attempt was then made to sew the peritoneum over the sutures, but was not practicable in this case, as it would not slide over the muscularis, and the stitches tore out on the slightest traction.

The uterus was then washed with a gallon of saline solution, some of which was allowed to go into the abdominal cavity. The parietal wound was then closed in the ordinary way.

Before the operation $\frac{1}{20}$ grain of strychnine was administered, followed by $\frac{1}{100}$ ergotinine citrate during the anæsthetic. At the termination ¼ grain of morphia was given. The pulse (72) remained undisturbed. There was no vomiting. Some blood and two clots came away during the first 24 hours.

After pains were very marked, which I attribute to having given $\frac{1}{60}$ ergotinine citrate by the mouth 12 hours afterwards. As these prevented sleep, I washed out the uterus with hot saline solution, and gave 20 grains of chloral; they stopped promptly. There were slight variations of temperature and pulse for a few days, and difficulty in moving the bowels, which was overcome by a magnesium sulphate enema. No tenderness or meteorism throughout.

The child was suckled as soon as the milk appeared, and the patient got up on the eighteenth day. Since then, mother and child have been in perfect health. The child weighed 6½ pounds at birth, and her sub-occipito frontal diameter was 4⅙ inches. It is certain, therefore, that craniotomy was the only alternative. Before closing the abdomen I occluded both Fallopian tubes.

I have to thank Dr. M. U. O'Sullivan, of Melbourne, for coaching me in the details and sending me his paper on the subject, and Professor Watson for his kind assistance and encouragement. Dr. O'Sullivan's paper in the *Intercolonial Medical Journal of Australasia*, November 20th, 1903, crystallises the whole matter.

NOTES OF A CASE OF ERYSIPELAS BEFORE AND AFTER PUERPERUM.

By Geo. Cuscaden, L.R.C.P., L.R.C.S. (Edin.), Hon. Out-Patients' Surgeon Women's Hospital, Melbourne.

ON the 10th June, I was called to professionally attend Mrs. Mc., aged 40, multipara. She complained of headache, and pains in the limbs; had rigors, and said her right arm felt very stiff and painful. On examination I found the forearm and arm up to the shoulder joint swollen, red and inflamed. I examined carefully for some wound or skin abrasion, but could not find one; I questioned her as to her having any injury to her hand or arm, but she stated she could not remember; afterwards she informed me that she had a small pimple near her right elbow joint, that she scratched it and it became inflamed, but that it was all right now. Her temperature was 102°; pulse 113; her tongue was furred, and she was very restless. She informed me that she expected to be confined at any moment.

On the evening of the 11th I received an urgent message to attend her; prior to my arrival she was delivered of a healthy male child without any assistance; in fact, she was alone at the time the baby was born. I visited her on the 12th; the erysipeloid inflammation had extended to the upper right half of the body, on a level with the mammary gland. 13th.—Temperature 102.6°, pulse 120: the left side of the body was attacked, at the same time there was a feeling of stiffness and soreness about the left ear, face and head. 14th.—The face and head became very much swollen, and the eyelids puffy and œdematous. She now complained of very severe pain in the right arm; on examination I detected on the forearm, about one inch below the right elbow joint, a fluctuating point. I made a free incision, and a large quantity of pus escaped; it continued to discharge freely for about a week, when it began to heal from the bottom of the wound, and gave no further trouble.

14th.—Temperature 103°, pulse 136. Tongue dry and brown; at times delirious; the lochial discharge became at this time very fœtid. I curetted the uterus and packed with iodoform gauze. Up to this stage I had treated the case with mag. sulph., quinine and iron, ichthyol 1 per cent., locally applied in the form of an ointment; light nourishing diet with a fair quantity of brandy. As I saw no improvement in the condition of the patient with the treatment I was adopting, I determined to try anti-streptococcic serum. I accordingly injected on four occasions. The injections had a marked effect on the temperature and pulse. The tongue became much cleaner, and the general condition of the patient showed marked improvement.

The erysipeloid inflammation, though increasing in area, became less virulent in character; it extended gradually down the body to the thighs, legs and feet.

The disease lasted three weeks from start to finish, ending up with free desquamation of the skin.

Erysipelas, as you are aware, is not uncommon during pregnancy.

My excuse for reading the notes of this case is—first, to call your attention to the advantage of serum treatment in such cases; and secondly, to the extensive nature of the disease occurring at such a critical time.

(Read before the Victorian Branch of the British Medical Association.)

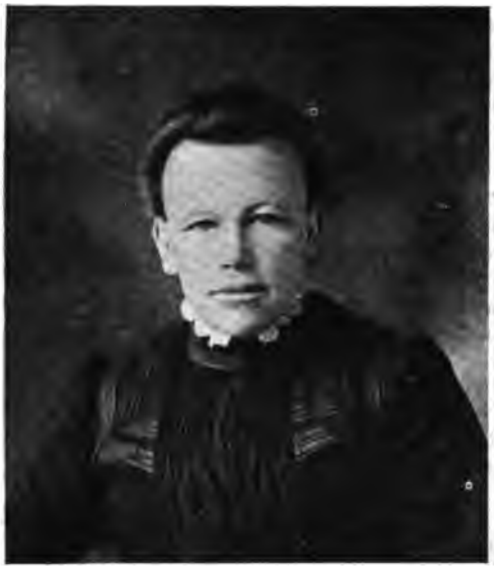
NOTES ON A CASE OF MYXŒDEMA.

By A. H. Fieldstad, Lic. Med. (Norway), Rotorua, New Zealand.

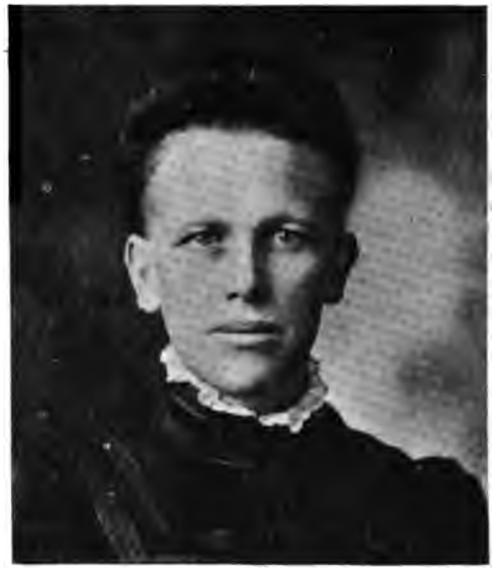
S.J., *æt.* 32, married, was seen by me in Auckland on June 30th, 1903. She did not come to consult me about herself, but brought her two children, who were suffering from some trivial complaint (catarrh). She afterwards told me that she had given up all hope of any improvement of her own condition, having, during the last two or three years been under the care of six or seven medical men, and having *inter alia*, been treated for Bright's disease and heart disease.

As the accompanying photo, No. 1, which was taken a few days after her first visit, shows, she presented the characteristic appearance of myxœdema, and, in addition, there was the slow, impeded speech, blunted senses, and mental faculties, loss of hair, especially in the periphery of the scalp, not so much on the crown, etc. The urine was free from albumin ; nothing to remark about the heart. Taking all this into consideration, there could be no doubt about the diagnosis. She was well aware of the gradual blunting of her mental faculties, and, as she expressed herself, she dreaded the day when she would have to go into an asylum.

The treatment, of course, was thyroid gland tabloids, commencing with 1½ gr. twice daily, gradually and slowly increasing to 6 gr. three times daily, finally and permanently, 5 gr. twice daily. There was never any toxic effect. The diuresis soon increased considerably, not to say excessively. In about a fortnight some improvement could be noticed, and subsequently the improvement was very rapid. Photo. No. 2 is taken three months after No. 1, but her appearance had then for some time been practically the same, so it did not take more than about two months to bring about the change. More striking even than the improvement of appearance was the improvement of speech, senses and mental faculties ; also the general feeling of health, return of the sense of smell, which had been completely suspended ; she could refer back to a certain date on which she smelt something she was cooking. In short, she made a complete recovery, and declares that she has never been in better health, either physically or mentally. Photo. No. 2 speaks for itself.



Before Treatment.



After Treatment.

My reason for sending these notes and photos for publication is, apart from the comparative rarity of these interesting cases, to point out that, perhaps, more similar cases than we imagine drag out a miserable existence towards a premature end without being diagnosed, and consequently, without receiving the only effective treatment. This woman had given up all hope, and was growing too apathetic to care.

A GIGANTIC SUBCUTANEOUS TUMOUR OF THE NECK.

By F. G. Griffiths, B.A., M.B. (Syd.), Gundagai, N.S.W.

J. H., male, *æt.* 66, was born in Middlesex, England, but for the last 47 years has resided at various places in the neighbourhood of Gundagai. He describes himself as a "mining expert," and has worked about the different goldfields of southern New South Wales and of Victoria. He has 19 children, fourteen of whom, including the youngest, now 13 years of age, are alive and healthy. The other five died as the results of accidents and acute infectious fevers. So far as he knows, none of his relatives, and certainly none of his children, ever had a tumour or growth of any kind. He himself is active and in the best of health. He has no other tumour in any part of his body.

The tumour on his neck first appeared 35 years ago. It began as a small, round smooth elevation, and for 15 years, though it gradually increased in size, it did not become so large as to be noticeable by strangers. It then grew faster for a time, and during the last 20 years it had been steadily increasing in size, and is, he thinks, still growing. It is not, and never has been, painful or tender. It causes little or no discomfort. Its presence has not resulted in any stiffness of the neck. The only movement with which it interferes is anterior flexion, and this only by its weight. He sleeps on it at night, using it as a pillow, for he finds it impossible to use an ordinary pillow. He thinks that sometimes it is slightly bigger in the morning, and that with alteration of posture it decreases again. He refers to it affectionately as the "little egg," a name bestowed by his children before it reached its present enormous size.

Examination shows it to be a dense, elastic, smooth, ovoid mass, readily deformed by firm pressure (for example by its own weight, readily recovering its round shape when the deforming pressure is removed. It has not the physical characters of a fluid cyst. It is almost sessile, its pedicle being short, thick and circular (12 inches in circumference) This stalk is situated immediately to the right of the median sagittal plane of the neck, and its middle point is about half an inch below the tip of the lobe of the ear. Though the stalk is unilaterally situated, the tumour bulges across the middle line. The stalk is covered with thick skin, continuous laterally and below with the skin of the back of the neck, and above with the hairy scalp, which latter indeed encroaches on the pedicle for about one inch. This skin is thick, tough and wrinkled, and covered with hair resembling that on the scalp and neck in its immediate neighbourhood.

The skin over the tumour itself is more or less smooth, and on its upper surface are a few discrete sparse hairs, while below it is bald, smooth and glistening from friction with the coat collar, which in turn is worn nearly through. A number of dark purple veins can be seen beneath the skin, and the presence of these have led the patient to suppose that the tumour is filled with blood. He finds it difficult to keep a hat on his head, and the upper surface of the tumour, and also the skin of his neck, are blistered and desquamating from exposure to the sun.

The substance of the pedicle is tough, but not tense, so that the tumour may be rotated through an angle of about 45° around an axis through the centre of the stalk and perpendicular to its base. Palpation reveals one thick fibrous band entering it from the ligamentum nuchæ on its inner side, but one only; apart from this it has no deep attachments and is very freely movable over the neck. Over the tumour itself, excepting near the pedicle, the skin is so tightly stretched that it cannot be pinched up, but I could not determine whether the tumour were movable within its covering of skin. Its circumference in an oblique coronal plane parallel with the base of its pedicle is 16 inches; its incomplete circumference from upper edge of pedicle round the tumour to lower edge of pedicle in a sagittal plane is 12 inches.

The patient is devoted to his "little egg." He would not part with it. As he says, it does him no harm; the only trouble he ever had with it was hæmorrhage from an abrasion caused by a blow from a piece of falling timber. He thinks it could not be removed without chloroform (I think it could under cocain), and he thinks chloroform is too strong.

The diagnosis seems to me to be between lipoma and sebaceous cyst, probably the former.

For an opportunity of examining the subject of this note, I am indebted to Dr. C. Louis Gabriel, of Gundagai.

REVIEWS AND NOTICES OF BOOKS.

The Nutrition of the Infant. By Ralph Vincent, M.D. London: Baillière, Tindall & Cox. Sydney: L. Bruck. 1904. Price, 10s 6d.

The book is well worth reading by all who are interested in the difficult subject of infant feeding. The matter is gone into very fully. He first discusses "Human Milk," "Lactation." In the chapter on artificial feeding he utterly condemns all patent foods and condensed milks. He says: "In the light of our present knowledge, the use of these substitutes for milk is deplorable, as it is one of the greatest factors in the excessive mortality and disease among infants." The author is a strong advocate for Rotch's percentage method of feeding; in fact, the book is written to show the advantages of this method of artificially feeding those infants who for some reason or other cannot obtain their natural nourishment. In order that this method can be carried out, it is essential to have, first, absolutely pure milk, and, secondly, to have a laboratory where this pure milk can be modified. Thus, we are told: "In order to provide a milk of suitable character, the first essential is that the handling of the milk from the outset should be conducted with the greatest precautions to insure its cleanliness and good quality." Now, although we hope for better things, we know that at present in Sydney it is quite impossible for the ordinary householder to obtain milk that is not swarming with bacteria, because none of the milk purveyors use any very special precautions to insure real cleanliness. And even if absolutely pure milk could be obtained, we have no laboratory where it could be modified. Chapter 6, on the milk supply, is an excellent one, and full of valuable information. It would be well if those responsible for the supervision of the dairies in the various municipalities could read it. We think this book is sound and scientific, but we doubt if it is quite practical; because when Dr. Vincent deprives us of all patent and proprietary foods and condensed milks, he leaves us only what it is utterly impossible for most of us to obtain, viz., pure milk humanised, sterilised, and modified by laboratory methods. But even if in time to come we can manage here to carry out all the recommendations of the Philadelphia Milk Commission, shall we have solved the problem of feeding infants artificially? Ashby has recently told us that infants may get scurvy even when fed on humanised, sterilised milk, modified after the most approved laboratory methods. And we certainly agree with him when he says "that the important problem of how to bring pure, clean milk within the reach of the poorer classes, and teach them to use it aright, has yet to be solved."

C.P.B.C.

A Text-book of Diseases of Women. By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania; Gynæcologist to the Howard, the Orthopædic and the Philadelphia Hospitals. With 655 illustrations, many of them in colours. Philadelphia, New York and London: W. B. Saunders & Co. Melbourne: James Little. Price, cloth, 25s; half-russia, 30s.

This work is certainly the best on the subject that has recently come to hand, well upholding the author's previous reputation. The opening chapter gives an excellent description of methods of examination and local treatment. The chapters on injuries to the pelvic floor and vagina are particularly good. The section dealing with diseases of the Fallopian tubes and ovaries is well up to date, the teaching on treatment true and practical. The same may be said of the urinary tract, in which this author includes the subject of floating kidney. The volume is concluded by a very full chapter on the technique of gynæcological surgery in general.

While the whole work is deserving of praise, it may be said in particular that the description of operations is very thorough, and the reader is here greatly assisted by diagrammatic illustration of the text. One does not often see such good diagrams. Dr. Hirst is not, however, quite consumed by the *furor operativus*; he does not forget to give reasonable space to the explanation of palliative modes of treatment. The hand of the experienced teacher, in short, is traceable throughout, and the book can be heartily recommended as a guide to both student and practitioner. The volume has been handsomely turned out by the publishers, the text is clear, and the illustrations executed with finish and completeness.

A.W.M.

A Text-Book of Obstetrics. By J. Clarence Webster, M.D. (Edin.), F.R.C.P.E., F.R.S.E., Professor of Obstetrics and Gynæcology in the Rush Medical College, in affiliation with the University of Chicago, etc., etc. Octavo, 515 pages, with 383 illustrations, 23 in colours. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Melbourne: James Little. Price, 25s.

The reputation which this author has already acquired as an original worker alone justifies its publication; and on perusal it is found to be a comprehensive text-book of the subject, and an excellent practical guide for the practitioner. Dr. Clarence Webster's style is lucid. His exposition of the anatomy of pregnancy, labour and the puerperium forms a valuable portion of the volume. In this part are embodied the valuable result of the study of frozen sections by the author and other workers. Directions for treatment are clear and practical. The illustrations and letterpress, as in most American publications, are beautifully done. This work can be heartily recommended as a reliable guide to obstetrics, brought fully up to the times.

A.W.M.

American Pocket Medical Dictionary. Edited by W. A. N. Dorland, M.D., containing the pronunciation and definition of all the principal terms used in medicine and the kindred sciences, together with over 60 extensive tables. Fourth edition. Philadelphia and London: W. B. Saunders & Co. 1903. Melbourne: Jas. Little. Price, 6s 6d.

The aim of the editor has been to compile a book handy in size, yet complete enough to supply the wants of the practitioner and the student. Of necessity, the definitions of terms are brief; but these are clear, adequate and to the point. In addition to the ordinary dictionary words, a considerable amount of matter in tabular form has been inserted, which should prove of value to students in preparing for examinations. The clear, heavy type in which the initial word is displayed at once attracts the attention, and the eye is thus spared much weary work, while the explanatory note following is set forth in very distinct lettering, a great improvement on the method of dictionary compiling in vogue in former times.

A MANUAL OF MEDICINE. Edited by W. H. Allchin. M.D., F.R.C.P., etc. London: Macmillan & Co. 1903. Price, 10s net.

In this volume are included, besides diseases of the digestive organs and liver, those of the peritoneum, pancreas, abdominal blood-vessels, kidneys, and ductless glands. The editor has written most of the sections on the digestive organs and the liver; Dr. Hale White treats of the peritoneum and its diseases; Dr. J. H. Bryant writes on the diseases of the abdominal blood-vessels; and Dr. Rose Bradford on diseases of the kidneys. The names of the authors are quite a sufficient indication of the general excellence of the work. A book wherein several authors write is sometimes unsatisfactory, from the inequality of the contributions; but the editor of this volume has succeeded in maintaining them all at a high level. Modern medicine being so vast and varied in its extent, it is impossible for one man to produce a satisfactory work; hence the systems or manuals of medicine now in vogue generally consist of contributions from various authors. This book can be confidently recommended to any practitioner who desires a work which, though briefly written, contains a satisfactory account of modern medicine. J.M.G.

MEDICAL LABORATORY METHODS AND TESTS. By Herbert French, M.A., M.D. (Oxon.), M.R.C.P. (Lond.), Medical Registrar, Guy's Hospital, London. London: Baillière, Tindall & Cox., Henrietta-street, Covent Garden. Sydney: L. Bruck. 1904. Price, 3s 6d.

This little book is intended to be a handbook for the medical laboratory, and has been written in response to several requests for a small guide dealing with the chemical and microscopical tests and examinations most commonly required by medical men. As such, we think the writer has well fulfilled his object. The chapters include the examination of the urine, the blood, the sputum, pus, the gastric contents, the fæces; also, microscopical examination in affections of the skin, examinations of serous exudations, cerebro-spinal and cystic fluids, and finally, tests for the commoner poisons. The various tests are clearly described, the possible fallacies are pointed out, and the significance of the reactions are indicated. The book is illustrated with diagrams of crystals, organisms, blood-cells, and pieces of apparatus employed in the laboratory.

We consider this one of the best handbooks of its class, and will be found a thoroughly reliable guide for the student and general practitioner in the investigation of disease. G.E.R.

OBSTETRICS FOR NURSES. By Joseph B. De Lee, M.D., Professor of Obstetrics in the North-Western University Medical School, Chicago, etc., etc. 12-mo., of 460 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders and Company, 1904. Melbourne: James Little. Cloth, price, 12s 6d.

Although this work has been written primarily for nurses, medical students will find it of much value. The work is divided into three parts, with an appendix. Part I. deals with the "Anatomy and Physiology of the Reproductive System." Part II. with "Nursing during Labour and in the Puerperium." Part III. with "The Pathology of Pregnancy, Labour, and the Puerperium." The appendix deals with interesting matters, as sterilisation of hands and instruments, dieting, etc., etc. There are really two subjects considered—obstetrics for nurses, and the actual obstetric nursing, and the author has combined them so that the relations of one to the other are natural and mutually helpful. The illustrations are numerous and for the most part have been made expressly for this work. The author makes a strong plea for the raising of the practice of obstetrics to a higher plane than it has hitherto occupied. The book may be welcomed as a valuable addition to the many works already published on the same subject. W.H.C.

MANUAL OF PRACTICAL ANATOMY. Cuningham. Vol. II. Edinburgh: Young J. Pentland. Sydney: Angus & Robertson.

Vol. I of this manual has been already reviewed, and little further need be said than that the same high degree of excellence is maintained in vol. II.

The description of the heart has been to some extent remodelled. The section on the brain, though, perhaps, more detailed than is usual in a dissecting manual, will be, by reason of the excellent illustrations and the clearness of the text, easily followed by the student. A.A.P.

THE PATHOLOGY AND TREATMENT OF SEXUAL IMPOTENCE. By Victor G. Vecki, M.D. Third edition, revised and enlarged. 12 mo., 329 pages. Philadelphia and London: W. B. Saunders and Company. 1901. Melbourne: James Little. Price, 10s.

The whole subject of sexual impotence and its treatment is discussed by the author in an exhaustive manner. In this edition, the book has been thoroughly revised, and new matter has been added, especially to the portion dealing with treatment.

The subject dealt with is, naturally, an unsavoury one to British readers; still, as the happiness or misery of many depend on the advice we can give them in this matter, it is necessary for medical men to be acquainted with the treatment most likely to do good.

To anyone wishing to make himself acquainted with the subject dealt with, this work can be cordially recommended.

Carbolic Acid and Plague.—In the annual report of the medical officers in charge of the hospitals of Hongkong the success attending the use of carbolic acid in the treatment of plague is demonstrated. During the last half of the outbreak the rate of mortality has been greatly diminished, and, although in the natural order of events some fall was anticipated, a reduction from 85 to 36 per cent. may fairly be attributed to unusual measures. It has been found that the doses of carbolic acid which a plague patient is able to take are enormous. The treatment begins with an initial dose of 144 grains in 24 hours—namely, 12 grains every two hours. One European patient consumed over 2500 grains of pure carbolic acid before his blood was pronounced free from plague bacilli. Yet, in spite of such huge doses, the poisoning of plague patients by carbolic acid is practically unknown in the colony. The remedy was tried in Hongkong in 1901, but with no marked result, and it is now the opinion of the medical officers that the drug administered in large doses is the most hopeful method as yet discovered of treating plague.

THE AUSTRALASIAN
MEDICAL GAZETTE.

SYDNEY, 20TH SEPTEMBER, 1904.

RECIPROCITY IN MEDICAL REGISTRATION.

THE question of reciprocity in registration of medical practitioners in Australia has recently engaged the attention of the British Medical Association at their meeting at Oxford in July of this year, and we learn that a resolution was passed that only medical qualifications which could be registered in Great Britain and Ireland should be allowed to be registered in Australia and New Zealand.

This matter, which has not been lost sight of in the past in this State, has again been brought forward, and at the last meeting of the Council of the New South Wales Branch of the British Medical Association, a short draft bill of two clauses, which had been drawn up at the suggestion of Dr. WORRALL, was read, and it was agreed to send it on to the New South Wales Medical Board for their consideration. The Medical Board of Victoria has also had the matter under their consideration, and on August 31st a deputation from that Board waited upon Sir SAMUEL GILLOTT, the Chief Secretary, asking him to try and secure an amendment of the Medical Act so as to restrict registration to those practitioners who have studied for at least five years, and to impose a fee of £5 5s for registration.

There is no doubt that this is a matter which demands serious attention. Graduates of some of the American colleges and other foreign universities, whose curriculum extends only over two or three years, come to Australia and are registered by some of the Medical Boards, there being at present no ground for refusing such applications for registration (unless the institutions granting the diplomas are well known to be bogus), although they would be refused in Great Britain. Again, graduates of foreign universities come to Australia and are registered upon production of their diplomas, but the same privileges are not accorded to British and Australian graduates, who may wish for various reasons to practice in those foreign countries. They are required to pass the State examination before they can be registered as legally qualified practitioners.

These conditions are hardly fair, and some amendment of the Act is required, but the difficulty is to secure such an alteration in the conditions of registration as will fully meet the needs of the situation. Registration as a legally qualified medical practitioner ought to mean a great deal more with us than it does at present, and the Medical Boards should have much greater power of dealing with registered practitioners who are guilty of unprofessional conduct. We really need a comprehensive Commonwealth Medical Act, which would establish an Australian Medical Council with a somewhat similar constitution to that of the General Medical Council of Great Britain, to control and regulate the conditions of medical practice in Australia, with branch registration offices in the different States. The different systems at present adopted by the various States of the Commonwealth require to be harmonised, and the imposition of a fee for registration is needed to meet the expenses incurred in administering such an Act. This is what we must work for, and we hope that the matter may receive the consideration and endorsement of the Australian Medical Congress at its meeting in Adelaide in September, 1905.

In the meantime, if nothing further can be accomplished, we must be content if our State Legislatures will consent to amend the Medical Acts to restrict registration on the lines indicated.

HOSPITAL ABUSE.

THE subject of hospital abuse is one which is constantly being revived, but we think more than passing attention must be paid to the steps taken by the New South Wales Western Districts Medical Association to bring this matter prominently before the profession. In another column we publish a report of the special meeting of the New South Wales Branch of the British Medical Association which was held on September 2nd, at which representatives from the Western Districts Medical Association were present and adduced arguments in favour of the resolutions which they had passed at Dubbo, and which they wished the British Medical Association to adopt.

It was apparent that the resolutions in the form in which they were originally passed required some modification. The British Medical Association cannot dictate to the hospital directors the terms and conditions upon which they are to admit patients. That is a question for the directors to decide themselves, although, perhaps, the expressed opinion of the profession might have some weight with these gentlemen. The matter, however, is not so simple as it at first sight appears. The directors of these large institutions have to try to make both ends meet; and they have made arrangements with the Government, Hospital Saturday Fund, and similar bodies, whereby in return for their financial support, these bodies try to secure the admission of patients to the hospitals, provided they are suitable from a medical or surgical point of view, independently of any consideration of their financial position.

There is no doubt that if the hospitals were adequately supported by the general public, the necessity for requiring patients who can afford it a certain sum per week towards their maintenance would never arise. As Dr. MacCormick stated, there is no doubt that the principle of admitting paying patients to the general hospitals is a source of a great deal of the abuse of hospitals by persons well able to pay ordinary fees for medical and surgical treatment. Yet the hospitals cannot afford to lose the hundreds of pounds which they at present receive in small payments per week by patients able to contribute a few shillings towards their support, and if all payments by patients are to be abolished and every patient enter the hospital as a pauper, then some other source of revenue must be sought to enable the hospital directors to keep up the institutions.

It was suggested that the admission of patients from the country should be delayed so that enquiry might be made as to their financial position. But it is often a matter of great difficulty to ascertain this, and as Dr. Hinder pointed out, even the country practitioner is sometimes quite unable to give any correct information on this point, and the delay in admitting the patient may be a real hardship in a deserving case. We are afraid that in spite of all efforts, the practice of which our Western friends complained will continue, and that well-to-do patients, if so determined, will by hook or by crook secure their treatment practically as paupers at the metropolitan hospitals. Still we are quite sure that every effort is made to check this abuse, and that none are more anxious to prevent it than the directors of the hospitals.

THE MONTH.

The Sale of Poisons.

THE annual report of the Pharmacy Board of New South Wales for the year 1903 shows that the total number of pharmacists on the register is 865. A reciprocal agreement between the States of New South Wales, South Australia, and Victoria came into force on February 1st, 1903, but no agreement had been arrived at with the other States, mainly owing to their unwillingness to recognise those New South Wales pharmacists who have been registered without having been apprentices or assistants before 1897 or having passed examinations. In consequence of this agreement, it was deemed desirable, in order to bring the education and examination of young men on an equal basis in the various States, and to allow of the required alterations being made, that the Government should be asked to introduce a short bill into Parliament. The Board considers the amendment of the Poisons Act necessary in the following particulars:—To include the free supply of poison by individuals to their customers under the penalty clause; to provide a fee for the issue of all poisons licenses; to prohibit the sale of ergot of rye, except by doctors' orders; and to include "all vegetable alkaloids and their salts" in the first part of the schedule instead of in the second part as at present.

The medical profession will heartily agree with these suggested amendments of the Poisons Act, and we feel sure that the support of the British Medical Association would be accorded to the Pharmacy Board in their efforts to secure these very necessary alterations in the Act.

The A.N.A. in Tasmania.

We learn that the Australian Natives' Association is determined on making a forward movement in Tasmania. The medical profession in that State should remember the warm discussion which took place at the Congress in Hobart in 1902, and the determined stand which has been taken in New South Wales and Queensland against this organisation, as one of the most dangerous of all societies to the welfare of the medical profession. We sincerely hope that before long steps will be taken to organise a strong branch of the British Medical Association in Tasmania, and that the Australian Natives' Association will be placed by that body in its proper position, namely, that of a political organisation, and not a legitimate friendly society.

Trained Attendants for the Insane.

Three years ago the South Australian Cabinet approved of regulations providing that all attendants in the Parkside Asylum, Adelaide, who had not completed a year's service on January 1st, 1901, or who should afterwards be appointed as attendants at that institution, should attend a systematic course of instruction on the care and nursing of the insane. This consisted of not less than 12 lectures by the medical staff of the asylum combined with practical instruction in the wards. On completion of the term attendants could present themselves for examination, and those successful would receive a certificate. This arrangement was made primarily in the interests of the junior attendants to fit them more efficiently for their responsible work. Dr. Cleland, in his annual report, states that the first set of attendants who entered on this curriculum completed the period of instruction during the year 1903. The examination questions were set by the Medico-Psychological Association of Great Britain and Ireland, and the examination was conducted by the Medical Superintendent of the Adelaide Hospital and the Resident Medical Officer of the Parkside Asylum. All satisfied the examiners and received the certificate of proficiency. Dr. Cleland remarks that this is an important step in advance towards the ideal of having "lunatic asylums" transformed into "hospitals for the insane," because the efforts of any medical officer are futile unless supported by an intelligent, trained and efficient staff of attendants on whom the brunt of caring for the patients naturally falls.

Medical Practitioners' Widows and Orphans' Fund.

In our correspondence columns last month we published some draft propositions for the formation of a Medical Practitioners' Widows and Orphans' Fund. This month Dr. Dick has forwarded to us a letter he has received from the general manager of the Mutual Life Insurance Company of New York in which that gentleman states his company is prepared to carry out this proposal, so far as the insurance side of the matter is concerned, to the approval of the Council of the New South Wales Branch of the British Medical Association. We have no doubt that it will meet with the approval of this Branch, and we hope our readers will carefully read and consider the proposals. One of the important features of the scheme provides against the possibility of insurance policies being mortgaged. We understand that the idea of this scheme arose from the painful discovery made on the occasion of the death of a well-known practitioner in Sydney recently, that his insurance policies were all mortgaged, and his widow and family were really left almost destitute. We shall be very glad to give any further information or explanation of the matter to anyone desiring it.

Sanatorium Accommodation for Female Consumptives.

The executive committee of the horticultural *fête* recently held in Sydney in aid of the Queen Victoria Homes for Consumptives, in handing over the sum of £1300, made a strong recommendation that arrangements be made for the admission of female patients as soon as possible. At the present time the sanatorium at Wentworth Falls is reserved exclusively for males in the earliest stages, and when the new additions are completed it will provide for about 45 patients. The only other country sanatorium is at Thirlmere, the old building which was erected many years ago by Mr. J. H. Goodlet, and which is used for the accommodation of more advanced cases among males, and for females. The condition of the Thirlmere Home is a cause of anxiety to the committee at present, and various suggestions have been made, but owing to want of funds the matter so far has not been adequately dealt with. The building is not in any sense a modern sanatorium, but to buy it from its present owners at a large figure and then pull it down and rebuild on modern lines would involve a very considerable outlay, and in consequence of the serious reduction in the invested funds incurred by such expenditure the annual income of the committee would be still further reduced. The only other alternative is to expend a considerable sum of money on the present building, and reserve it exclusively for female patients ; if that were done, the Wentworth Falls Sanatorium would necessarily be used for both early and more advanced cases of the disease than at present. There is no doubt that the former alternative is the proper scheme to adopt, and if the necessary funds are forthcoming, we believe the committee would see the necessity of erecting at Thirlmere or some other suitable locality a sanatorium for females only on modern lines.

A Proposed City Consumption Dispensary.

The Health Committee of the Sydney Municipal Council has recommended to the Council the inclusion of the following clause in the proposed new Corporation Act :—" The Council shall establish in this city and maintain out of the city funds dispensaries for the purpose of providing medicine and drugs for the use of persons suffering from consumption, and may make by-laws in regard thereto and including therein power to charge fees for the supply of such medicine or drugs, and may also in such by-laws provide for the issue from every such dispensary of drugs or medicine free of charge to poor persons." We are fully in accord with every effort that can possibly be made to check the progress of pulmonary tuberculosis, but we think that modern experience all over the world goes to show that the removal of patients from their insanitary surroundings and giving them pure air and wholesome food is of much greater importance than giving them drugs or medicines of any kind. While money is urgently needed to extend the accommodation for these patients in the country, it is hoped that the question of the expenditure of the city money on a city dispensary will be carefully considered, since at the large metropolitan hospitals the out-patients' departments provide all that is necessary in the way of medicines for patients suffering from this disease, and also the necessary machinery for the selection of suitable cases. We have on previous occasions pointed out how great is the necessity for a hospital for advanced cases of pulmonary tuberculosis. There is no place for advanced cases of this disease except the Liverpool Asylum, and the Liverpool Council have agreed to a resolution that the Mayor should arrange with the Minister for Works to receive a deputation to urge upon him the desirability of the removal of cancer and consumptive patients from the Liverpool Asylum to a building specially constructed, and so situated as to secure treatment for the inmates on the most recent system. We hope that the Government will consider this matter at an early date.

A post-graduate course in bacteriology will be given by Professor Welsh at the Sydney Medical School during Michaelmas term. The course will consist mainly of practical laboratory work, and is open only to a limited number of qualified medical practitioners. It is provisionally suggested that the course should begin about the 10th of October, and that the meetings should be held in the afternoon between three and five o'clock twice a week. Early application should be made.

BRITISH MEDICAL ASSOCIATION NEWS.

PROCEEDINGS OF AUSTRALASIAN BRANCHES.

Victoria.

THE ordinary monthly meeting of the Branch was held at the rooms, 178 Collins-street, on Thursday, August 11th.

The PRESIDENT (Dr. Weigall) occupied the chair, and after the minutes and correspondence had been attended to, he gave a brief *resumé* of the negotiations which have been going on with a view to healing the breach which had occurred with the 1900 Council. He read the letter sent by the sub-committee, and the reply received.

Dr. HENRY also explained that what the present Council wished to achieve was a reconstruction of the Victorian Branch of the B.M.A. on the basis of a fuller and popular representation of the profession, so that it would be able to express opinions on all questions of policy and current matters, and so become an active agency to initiate and support reforms. He thought that there could be no necessary virtue in having numbers of medical societies in Melbourne, and considered that the profession should be bound together by a sympathy of general principles that would make union of action both effective and honourable.

Dr. CUSCADEN also urged the endorsement of the letter of the sub-committee, and was sure that the old committee would give the matter most favourable consideration.

Dr F. S. GERMAINE-LULHAM moved, and Dr. BECKETT seconded—" That the members of the Victorian Branch of the B.M.A. learn with pleasure that endeavours have been made to bring about a reconciliation with the 1900 Council, and cordially endorse the sentiments of regret that anything should have occurred to interfere with the hitherto harmonious relationship existing between members of the Branch as embodied in Dr. Henry's letter of June 15th to Mr. G. A. Syme." Carried unanimously.

The PRESIDENT, on the recommendation of the Council, moved—" That Surgeon-General W. D. C. Williams, C.B., Knight of Grace, Order St. John of Jerusalem, Director-General Australian Army Medical Services, be elected an honorary member of the Branch."

Dr. CUSCADEN seconded the motion, and it was carried unanimously.

Dr. CUSCADEN read " Notes of a Case of Erysipelas occurring before and lasting after Puerperium." (See page 462.)

The PRESIDENT thought the case was a most interesting one, and the question that arose in his mind—Was or was it not connected with the puerperium ? He remembered a noted surgeon who before the days of antistreptococcic serum treated a case of septicæmia in a boy who was dying with serum obtained from a man who was recovering from septicæmia. Dr. ii of this serum were injected into the boy twice with complete recovery. He thought in all cases where the streptococci were the cause, the serum treatment was of great use.

Dr. BRYANT mentioned his experiences in several cases of septicæmia following upon neglected confinements. He had noted that such cases were frequently reported in the journals as recovering after the use of antistreptococcic serum, but his experience had been that the serum certainly lowered the temperature for a time, but did not seem to have much permanent result in some puerperal cases. He suggested the advantage of fresh sera being made in the States, as no doubt there must be a certain deterioration during their journey from England and other places to Australasia.

Dr. VANCE said that treatment with antistreptococcic serum had been very successful where the infection was due to streptococci. In puerperal cases there were often staphylococci as well as streptococci and other organisms, and naturally the antistreptococcic serum failed in such cases as these. He had noted that nearly all sera produced a fall of temperature when injected.

Dr. FOX inquired if the child had been suckled, and if so, what effect was produced ?

Dr. HENRY asked if Dr. Cuscaden had any other cases of a similar nature following upon this one ?

Dr. CUSCADEN, in reply, stated that the patient had undoubtedly infected herself through a pimple and by means of her finger nail. He had treated an almost hopeless case of puerperal fever with antistreptococcic serum with a marvellous result. The temperature dropped, the pulse became normal, the tongue moist, and sleep was obtained. The patient made a wonderful recovery. He thought it would be wise to examine the blood and find out the form of infection in all these forms of disease, and then to use the serum that would cure the infection. As regards the baby in the case he had reported, it was not suckled owing to the weak condition of the mother, and he thought it would be inadvisable to suckle infants in such cases. He had no other similar cases following upon this one.

Dr. W. R. FOX, in speaking of some applications of the X-rays, said that when first introduced, the X-rays were mainly used for discovering the presence and location of foreign bodies, and for the examination of fractures. Since then, however, their useful application has been extended in many directions. As instructive evidence of their usefulness the following cases were mentioned. The first was that of a hat or shawl pin in the left bronchus. This case was sent for X-ray examination by Dr. Bryant, of Williamstown. The patient, a lad of about 14, had been sitting in a rocking-chair with the pin in his mouth. The chair was rocked too far and threatened to go over backwards. In the patient's effort at saving himself, the pin disappeared. It gave no indication whatever of its presence, and it was nearly a month afterwards when Dr. Bryant determined to have an X-ray examination made. This at once showed the pin, which was of the ordinary thin steel variety, three and a half inches long, with a round glass head, in the left bronchus. Its position was accurately determined by the rays, and since it was probably impossible to reach it by the tracheal route, it was removed with but little difficulty by an intercostal incision, extended on through the lung. It is remarkable that the pin fell into the left bronchus, since foreign bodies entering the trachea usually find their way in to the right. Another case in which the rays proved of great service was that of a patient brought for examination by Dr. Balls-Headley. In this, the diagnosis, which had previously been obscure, was cleared up by the rays, which showed a large hydatid cyst, projecting from the upper convex surface of the liver into the right side of the chest. Operation confirmed this, and resulted in the patient's recovery. Another patient presented himself for examination in whose case the principal symptom complained of was a paroxysmal laryngeal cough of a barking character, and very suggestive of the cough produced by pressure on the laryngeal nerve. The indications found on general examination pointed to aneurism of the aorta, and this was clearly and fully confirmed by X-ray examination, the pulsating dilatation of the aortic arch being distinctly seen. Another instance was one in which an unerupted canine tooth was found in the upper jaw. The patient had consulted Dr. Kenny about her sight, and as the presence of an unerupted tooth was suspected, he sent her for X-ray examination. The tooth was found, and its location fixed so exactly that the operation for its removal was rendered quite simple.

Dr. Fox also exhibited a small electric motor which could be used for a variety of purposes. It was worked from a 12 volt accumulator, and could be driven up to 3000 revolutions per minute. With its driving shaft vertical, it was shown working a centrifuge for sedimenting urine. By an ingenious arrangement, the position of the motor could be changed so as to bring its driving shaft into a horizontal position, and it was then shown working a long flexible shaft to which could be fitted bone drills, trephines, etc. In this position also a small ventilating fan could be attached to it and used, for instance, to cool a sick room.

Dr. Weigall saw the boy who had swallowed the long pin operated upon, and the operation was made particularly easy by the information given by the X-rays. He would like to know if it would be possible to see sterile or active hydatid cysts in the substance of the internal organs if they were not undergoing calcification or suppurating? If so, it would be a great help to diagnosis.

Dr. Beckett said that the X-rays opened up a wider field than many people supposed. A great many people died from foreign bodies in the lung that had never been diagnosed. For example, he had seen a patient, aged 40, with every appearance of phthisis; he had lost between two and three stone in a few months, and was supposed to be tuberculous. The X-rays showed a small metallic substance in the right lung, and on making inquiries he found that the patient had swallowed a half-inch tack about two years ago. This man refused to be operated upon. He also related the details of false teeth and other foreign bodies that he had discovered by means of the X-rays.

Dr. Fox, replying, thought it possible to distinguish a hydatid of fair size in the substance of any of the internal organs by means of the X-rays, the distinguishing points being a clearer space in the solid substance of the organ, which would be egg-shaped, and if it was fairly large and full of fluid this would help considerably. If the cyst were a small one, it would be very doubtful if it could be distinguished.

New South Wales.

The general monthly meeting of this Branch was held at the Royal Society's Room on August 26th. Present: Dr. MacCormick (president) in the chair, and members. Visitor, Dr. A. H. Clarke, of Hobart.

The minutes of the previous meeting were read and confirmed.

The Chairman announced the election of the following gentleman:—Dr. F. G. Baur, of Medlow Bath, and the nomination of the following:—Drs. G. B. Thomas (Ashfield), J. K. Osborne, F. S. Tange (Mosman), R. R. P. S. Bowker (Stroud).

Dr. G. E. Rennie read some notes on a case of "Recovery from Cerebral Tumour," and exhibited the patient. (See page 456.)

Dr. Mills said he agreed with Dr. Rennie as to the diagnosis of this case being one of cerebral tumour, and he also thought there could be no doubt as to the seat of the disease. Cases of this kind were extremely rare, and he thought the patient ought to consider himself extremely lucky in having recovered from so serious a condition as that described.

Dr. Sinclair Gillies considered Dr. Rennie's case one of great interest. He doubted, however, whether the diagnosis of a pontine tumour clearing up spontaneously was absolutely justified. A tumour in that region producing interference with the ocular and bulbar nerves would probably produce more marked signs of pressure on the pryamidal tracts. The symptoms could, he thought, be possibly explained by a chronic basic meningitis. Of course the diagnosis must be obscure, but he thought that signs of tumour should be beyond doubt before a diagnosis of spontaneous recovery from cereblar tumour was made.

Dr. Rennie, in reply, said he had expected the diagnosis of cerebral tumour to be criticised, but he could not agree with Dr. Gillies in his arguments in favour of the possibility of the case being one of gummatous basic meningitis. If it had been, one would have expected to have had more definite and permanent signs of involvement of the cranial nerve trunks. The symptoms pointing to cranial nerve involvement, while definite enough in a way, yet were more easily explained as due to pressure or interference with the nerve nuclei in the pons rather than disease affecting the nerve trunks. In view of the succession of the symptoms he had described, and the serious condition in which the patient had been, he considered the diagnosis of cerebral tumour as almost certainly the correct one.

Dr. Macdonald Gill exhibited a child suffering from "Disseminated Sclerosis of Congenital Origin," and read a few notes on the case. (See page 458.)

Dr. Rennie considered the case exhibited by Dr. Gill one of extreme interest. He must confess, however, at the outset that he could not agree with the diagnosis of disseminated sclerosis of congenital origin. While the patient presented some of the symptoms usually met with in cases of that disease, he thought that the talipes and the amount of rigidity and contracture were such as were never met with in cases of disseminated sclerosis. Moreover, the symptoms had in all probability existed from the time of birth, although they had only attracted attention when the patient first began to walk. Diseases of the nervous system might be classed under three groups: first, those due to some defect in development, and of ante-natal origin; secondly, those due to some defective vitality in certain structures in the central nervous system—the group described by Sir W. Gowers as "abiotrophies"; and thirdly, those due to some definite acquired infection. The most recent investigations as to the nature of disseminated sclerosis, conducted by Tredgold at the Claybury Laboratory, pointed very strongly to that disease being one of acquired toxic origin. If that be the true pathology of disseminated sclerosis, then he did not see how a patient who was obviously suffering from some congenital disease could be diagnosed as a case of disseminated sclerosis, although it might present some of the symptoms usually met with in that disease. The picture of disease presented by Dr. Gill's patient was, in his opinion, much more like that of Freidreich's disease, but in view of the exaggerated reflexes it did not fall in with the classical description of that disease. But there were certain cases which had been described as aberrant forms of Friedreich's disease, and he was disposed to regard the case as falling within that category.

Dr. **Sinclair Gillies** agreed with Dr. Rennie that the case was not one of disseminated sclerosis, but did not think it one of Freidreich's ataxia. Freidreich's disease was excluded by the marked increase of knee-jerk, presence of ankle clonus, and extensor plantar response, with absence of sclerosis and the peculiar over-action of the muscles seen in these cases when using the hands. He considered the case to be one of congenital spastic diplegia, or birth palsy as it is sometimes called. The condition of spastic paraplegia noticed as soon as the child attempted to walk agreed with this condition, and the other symptoms—nystagmus, slow speech, and ataxy in the arms—were all present in some cases of congenital diplegia. In this case the nystagmus was slight and the ataxy not of the coarse character usually seen in disseminated sclerosis.

Dr. **Gill**, in reply to Dr. Rennie, said that he could not look upon the case as an example of Friedreich's disease; this disease as originally described formed a perfectly definite clinical entity, differing widely from the present case. In reply to Dr. Gillies, he said that he agreed with him that there was sclerosis in the lateral columns; but he thought that the absence of any rigidity in the arms made it probable that the lateral columns in the upper part of the cord were comparatively free. Again, the affection of speech and the nystagmus suggested lesions at the base of the brain; the scattered nature of the symptoms suggested scattered patches of sclerosis as the cause. The real question at issue was: Is there a systemic lateral sclerosis involving both brain and cord ? or a lateral sclerosis in the lower half of the cord, with scattered patches in the upper part of the cord and brain ?

Dr. **Macdonald Gill** read some notes on a case of "Acute Myelocytic Leukæmia."

A special general meeting of the Branch was held on Friday, 2nd September, 1904, at the Royal Society's Rooms. Present: Dr. MacCormick (president in the chair), and about 30 members.

The **President** stated that the meeting had been called to consider the following resolutions passed by the Western Districts Medical Association:—

1. That in the opinion of the Western Medical Association no patients from the country, excepting accidents and cases of great urgency, should be admitted to the metropolitan or suburban hospitals without a letter of recommendation from a medical man in the district in which they reside.
2. That the terms of the above resolution be notified to the New South Wales Branch of the British Medical Association, with a request that the same may receive its consideration.

The **President**, before going on with this business, said he was sure they would all regret to hear of the sudden death of Dr. Angel Money that morning. On the motion of Dr. **Rennie**, seconded by Dr. **Odillo Maher**, it was unanimously agreed to send a letter of condolence to his widow.

The **President** then called upon Dr. Machattie, of Bathurst, to move the resolution.

Dr. T. A. **Machattie** said that a meeting of the Western Medical Association had been held at Dubbo some months since, at which this matter had been discussed, and it was regarded by them as of vital importance. They did not wish the subject to be discussed as affecting the interest of country practitioners only, since the object they had in view was to protect the profession generally and to prevent the hospitals being imposed upon. Many patients residing in country districts, on being informed that it was necessary that an operation should be performed on them, left the country practitioner and privately went to Sydney to enter some hospital either in Sydney or its suburbs. Subsequently they returned home again to report that they had been operated on at this or that public institution by some well-known surgeon. They did not object to patients obtaining treatment by a Sydney surgeon, but it was a grievance that wealthy residents should avail themselves of public hospitals and maybe undergo treatment either for a greatly reduced fee or obtain relief as absolute paupers. Therefore the Western Districts Medical Association had deemed it advisable that the question should be brought before the New South Wales Branch of the British Medical Association that night, hoping that an expression of opinion on the matter might be obtained, being aware that the value of the opinion expressed by the Branch would carry more weight than anything that the Western Districts Medical Association could do itself. He wished to point out that it was in the interest of the Sydney practitioner quite as much as that of the country doctor that the matter was brought forward. The medical superintendents of public institutions were placed in an anxious position by such patients applying for treatment at hospitals, and in communicating with the country practitioner before admitting them particulars relating to the financial position of persons might be obtained.

Dr. **Burkitt** (Dubbo), in seconding the resolutions, said he did not know that he could add anything to what Dr. Machattie had said. The matter needed to be regarded from every point of view, both in the interests of the country practitioners and the operating surgeons in the metropolis. He did not like to see patients who were well able to pay ordinary fees going away to Sydney and being operated on without paying anything. He thought that the medical superintendents should take some means to sift the applicants for admission. In case of patients from the country applying for admission he thought that the superintendents should put off the admission and obtain some information either by letter or wire as to their financial position. He could confirm Dr. Machattie's remarks as to individual cases. He thought it was a matter which urgently needed some attention at the hands of that Branch.

Dr. **Binney** thought it would be interesting if those gentlemen would suggest what action they considered necessary to make the resolution effective. How could they remedy the present state of affairs ? The superintendents of the metropolitan hospitals were often placed in positions of great difficulty, mainly in consequence of the arrangements made between the hospital directors and the Government and other public bodies. The superintendents were, after all, the servants of the directors, and they had to carry out the rules and regulations of the boards of directors. When a patient presented himself with a Government order, if he were a suitable applicant from a medical or surgical point of view, they could not refuse his admission." The medical superintendents may be quite in sympathy with the resolution, but were not free to act always in the interests of the profession. He would suggest that the Western Medical Association should write a strong letter to the superintendents of the hospitals, and get them to make it as difficult as possible for patients from the country to gain admission until they had full information as to their financial position.

Dr. **Stratford Sheldon** considered the main cause of the hospital abuse to be the system of the honorary physicians and surgeons recommending patients to be admitted to hospital under their own care.

Dr. **Worrall** agreed with all that Dr. Machattie had said, and Dr. Binney had pointed out the difficulty of accomplishing what was required. He did not think that the reason assigned by Dr. Sheldon was the correct one, since patients did not come in many cases direct to the doctor but to the hospital by some of the means stated by Dr. Binney. At the Sydney Hospital he did not see the vast majority of his patients until he saw them in his beds in the hospital. He would support Dr. Binney's suggestion that the medical superintendents of the hospitals should in any doubtful case defer the admission of the patient until they had communicated with the patient's medical man in the country as to their financial position.

Dr. **Steer Bowker** said that this matter was a burning question to both city and country men, and was the subject of frequent discussions. At the same time he thought that there was, perhaps, not so much hospital abuse as was sometimes maintained. He noticed that Dr. Machattie had spoken of the suburban hospitals as well as the city hospitals. He knew of one suburban hospital at least, and there may be more for all he knew to the contrary, where there were paying wards attached, and it was not only the country practitioners but also the city surgeons who lost patients as a result of this arrangement. At the Sydney Hospital he was certain the medical superintendent did his best to prevent abuses, but he was a servant of the board of directors, and was bound by certain rules and regulations. He held in his hand a printed form which was required to be presented by every applicant for outdoor treatment, signed by some person who knew the applicant to be deserving of treatment on the score of his financial position. This recommendation was required in every case *if possible*, but it was not always possible. Then it was distinctly laid down in the objects of the Sydney Hospital that patients may be admitted on payment of certain sums per diem under certain conditions. He thought that they would all sympathise with Dr. Machattie's remarks and with the country men in general in this matter; but the city men suffered in exactly the same way. He thought the country practitioners should at once notify the metropolitan hospitals if they knew of any case disappearing in the way described by Dr. Machattie, and reasonably supposed to have gone to Sydney for treatment. If the hospital authorities were duly warned, he had no doubt that every effort would be used to prevent the admission of such a patient into a metropolitan hospital.

Dr. **Palmer** was in sympathy with the resolutions, and he thought that there was a good deal of truth in Dr. Sheldon's statements. He would move as an amendment that they expressed sympathy with the resolutions, and referred the whole question to the Council of the Branch for further consideration as to what could be done in the matter. He thought that now that the subject had been prominently brought forward, it would be a pity if it were allowed to drop without some further definite action.

Dr. **Hinder** thought that too many matters were referred to the Council. This was a matter which concerned the whole profession, but the smallness of that meeting was an indication of the general lack of interest in the subject. He did not think consultants sent patients into hospitals under their own care without due consideration and careful investigation as their being able to pay a fee. Consultants were not fools to their own interests, and were as keen on getting fees as the country practitioners. The fault sometimes lay with the country practitioners, for within the last two years he had had patients sent to him from the country by medical men with a letter stating that they were paupers and unable to pay any fee, and yet each one of these had paid him a good fee for operation. At the Royal Prince Alfred Hospital he thought that every care was taken to prevent the admission of patients who were able to pay fees, and if a patient successfully ran the gauntlet of the various stages of investigation into his financial position he must be very acute. He thought Dr. Binney's suggestion a good one, but perhaps not always easy of application. He thought that patients frequently came to town and went from one medical man to another seeing who would do the operation the cheapest, and there was often no opportunity of ascertaining the patient's financial position, for once he had left the consulting room without some definite arrangement being made as to fees, etc., he had gone for good in most cases.

Dr. **Crago** said that the matter had not been neglected, since it had been often discussed for a number of years past. Dr. Foreman and Dr. Chisholm had both taken a prominent part in the past in attempting to prevent hospital abuse. The difficulty was that it was almost impossible to ascertain the patient's financial position. He was, however, quite sure from his own experience that a great deal was accomplished by the medical superintendents in preventing the admission of patients to hospitals able to pay the ordinary fees. He knew of three such cases being refused admission in one week to the Prince Alfred Hospital. No doubt members of Parliament did attempt to use their influence for the admission of patients without due regard to their financial positions.

Dr. **Machattie**, in reply, said he would like to see the resolution accepted by the meeting. He was much pleased to see the broad view which had been taken of the subject by the speakers, and he hoped that though the resolution only be passed, yet that the matter would not be allowed to drop. He quite understood the arguments advanced by Dr. Binney, and the difficutlies encountered by the medical superintendents. Still he did not think it was right to sit down and do nothing because the directors of the hospitals had made certain agreements or regulations as to the admission of patients. He considered the profession should not be tied down to do work in the hospitals which they would not do in their own consulting rooms. There was another point he would touch upon, and that was that he did not see why eminent men, whether surgeons or physicians or specialists, should be penalised. He thought that any one however poor should be able to secure the best advice, and if they were unable to pay the full fee he thought that the surgeon or specialist would be justified in taking a small fee. He was, however, content to leave the matter in the hands of the Council of the Branch.

Dr. Bowker suggested the amendment of the resolution by inserting the words " it is undesirable that any." instead of the word " no " in the second line of the resolution.

Dr. Machattie was quite willing to accept any amendment which did not vitally alter the meaning of the resolution.

Dr. Crago suggested then that instead of " Western," should be inserted the words " New South Wales Branch of the British." This amendment was accepted by Drs. Machattie and Burkitt.

The President was of opinion that the source of the whole trouble lay in the admission of patients to the public hospitals who paid anything at all. These people considered that by their paying a few shillings a week they were paying for their treatment. He thought that if all patients entered the hospitals practically as paupers they would hear less of hospital abuse.

The resolution, amended as follows, was then put and carried unanimously :—" That in the opinion of the New South Wales Branch of the British Medical Association it is undesirable that any patients from the country, excepting accidents and cases of great urgency, should be admitted to the metropolitan or suburban hosiptals without reference to a medical man in the district in which they reside."

Dr. Hinder then moved—" That a copy of this resolution be sent to the executive authorities of the city and surburban hospitals, and to the Board of Health."

Dr. Palmer seconded this, and it was carried unanimously.

COUNCIL MEETING.

A meeting of the Council was held at the Association's Rooms on September 9th, 1904. Present: Dr. MacCormick (president), in the chair; Drs. Abbott, Beeston, Pockley, Hinder, Newmarch, Crago, Rennie, Maitland.

Minutes of previous meeting read and confirmed.

The following members were elected :—Drs. G. B. Thomas, Ashfield, J. K. Osborne, F. S. Tange, Mosman; R. R. P. S. Bowker, of Stroud.

Letter received from the secretary of the Royal Society with reference to the conditions under which their room was let for meetings.

Communication was received from Messrs. Sly and Russell covering a proposed amendment of the Medical Act with reference to reciprocity of medical registration. Resolved—" That this be sent on to the Medical Board requesting that body to urge the Government to introduce this as a Government measure."

Resolved—" That no member of the New South Wales Branch of the British Medical Association should subscribe to the alphabetical professional list proposed to be inserted (if paid for) in future issues of the Telephone Directory."

Resolved—" That in the opinion of the Council, while there appears to be no strict ethical rule to the contrary, it is, under ordinary circumstances, bad taste on the part of an outside applicant, and against the interests of the hospital, to oppose the promotion or reappointment of a member of the staff."

Report of the conference between representatives of this Council and representatives of the Pharmaceutical Society was received and discussed.

The matter of the library of the Branch was left in the hands of the hon. librarians.

South Australia.

The August meeting of the Branch was held at the University on the 31st, at 8 p.m.

Present: Dr. C. W. Hamilton presided over an attendance of over 20 members.

Minutes of last meeting were read and signed.

Exhibits: Dr. C. W. Hamilton showed a patient whose eyesight had been affected by a bullet wound in the head. Dr. Gunson showed a case of morphœa on the chin.

Dr. W. A. Giles was declared elected a member of the Branch Council.

The President reported that a deputation had waited on the trustees of " Kalyra " in reference to the Consumptives' Hospital.

Dr. Newland moved—" That it is desirable that legislation should be introduced dealing with the training and practice of midwives."

Dr. Jay seconded the motion.

Many of those present took part in the discussion, and the motion was carried. It was also decided to refer this motion to the proper section of the forthcoming " Australasian Medical Congress."

Dr. Newland read a paper on a case of " Perforating Duodenal Ulcer " (see page 455), which was discussed by Drs. J. A. G. Hamilton and Cumpston; and Dr. J. G. Wilson read a paper on a case of " Eclampsia."

Queensland.

A meeting of the Branch was held on Friday, September 2nd ; Dr. W. S. Byrne (president) in the chair, and an attendance of 14. Visitors : Dr. G. Sutton and Dr. Woolraabe.

Dr. Love exhibited a specimen of " blue pus."

The Hon. Secretary read for Dr. Pulleine, of Gympie, a paper on " A Successful Cæsarean Section " (see page 461) ; also a paper on " A Successful Cæsarean Section," by Dr. Sutton. (See page 460.)

Dr. Carvosso read notes of several interesting midwifery cases.

The President announced that the next meeting of the Branch would be held at Toowoomba on Saturday, October 8th.

UNIVERSITY INTELLIGENCE.

University of Sydney.—At the last meeting of the Senate of the University, the Chancellor (Sir Normand MacLaurin) presiding, it was reported that the following gentlemen had been appointed as representatives of the Dental Hospital of Sydney on the council of the amalgamated Dental Hospital :—Messrs. E. R. Magnus, E. K. Satchell, H. Peach, Richard Arthur, Hugh Paterson, and Donald Smith. The Department of Public Instruction, Brisbane, asked the Senate to conduct an examination for exhibitions to universities. It was resolved that the request be complied with, and it was referred to the board for conducting the public examinations to carry out the details. A letter was received from the Chamber of Commerce, enclosing a petition signed by 84 intending students for the establishment of a Faculty of Commerce in connection with the University. The matter was referred to a committee to examine into the practice of other universities, and to bring up a report upon the subject. On the recommendation of the several faculties of arts, law, medicine, and science, it was resolved that the professors of modern literature, law, physiology, and geology be selected as *ex officio* members of the Senate for a period of two years.

REVIEW OF CURRENT MEDICAL LITERATURE.

SURGERY.

How far shall we treat the Gall-bladder as we do the Appendix?

Westbrook (*Brooklyn Medical Journal*, July, 1904) says this is one of the burning questions for the surgeon at the present time, and it is no less important for the medical practitioner, as on the latter depends the decision whether his patient with gallstone disease shall receive early surgical treatment as well as his patient with a diseased appendix. Unanimity prevails among the profession as to appendicitis being a surgical disease and as to the wisdom of early and radical surgical intervention, but not so as to gallstones. The basis of a satisfactory surgical treatment of gallstone disease has been laid, and it only remains to work out rules of procedure in differing conditions, which increased experience will soon be able to determine for us. The feeling is growing more and more with the surgeon that the gall-bladder is a useless appendage, capable of producing unlimited mischief when diseased. The chief questions the author discusses are: (1) Is the gall-bladder very similar, anatomically, to the appendix? (2) Has it any useful function in the economy? (3) Do gallstones originate also in the ducts outside the gall-bladder? (4) Do gallstones recur after operations for their removal? (5) Can they be cured by medical treatment? (6) Do not the demands of safe surgery often require the preservation of the gall-bladder in surgical procedures? and (7) what are the conditions of the biliary passages where the gall-bladder is, without question, better out than in? (1) There is some slight resemblance anatomically between the gall-bladder and the appendix, in that both are hollow, and more or less tubular, and contain a certain amount of secretion; both are lined with mucosa, continuous with that of the intestine, and liable to bacterial invasion. The appendix, however, is merely a vestigial structure, without function, and may be snipped off without loss; but not so the gall-bladder, which is a functional and continuous part of a system of bile ducts of wide extent. Infection within the gall-bladder means usually infection within the bile duct system. The blood supply is very different, so that the appendix frequently becomes gangrenous, while the gall-bladder very rarely does so. (2) Some authorities are inclined to regard the gall-bladder as a rudimentary or vestigial structure like the appendix, but the study of lower forms of life does not show that it represents any more highly developed organ than it is found to be to-day. Its distribution in the lower forms is very peculiar, it being present in some and absent in other members of the same order. The ox has a gall-bladder, but the horse has none. The goat has a gall-bladder, but the deer has none. The hawk has it, but not the dove. In general, the presence or absence of a gall-bladder depends upon the character of the food of the animal and the type of the digestion. Most of the flesh eaters have a gall-bladder, and the digestion is intermittent, while in vegetable eaters the gall-bladder is often absent, and the digestion is nearly continuous. It has been looked upon as a storage reservoir; but its capacity is insignificant in comparison with the amount of bile secreted in 24 hours. It has also been looked upon as a flush tank to clear the common duct of infective agents which may enter from the intestine. Whatever the functions of the gall-bladder, it is not an indispensable organ, as patients from whom it has been removed get on quite comfortably without it. It must be looked upon as a modified portion of the hepatic duct system, and must be considered as a part of a functional whole. (3) All observers are agreed that gallstones almost invariably originate in the gall-bladder, and that the hepatic and common ducts are but rarely their seat of origin. Also that gallstones are the result, primarily, of a mild microbic invasion of the gall-bladder. Five or six months are required for the perfect formation of a calculus in experiments on the lower animals. The first cause of practically all calculi found in the biliary passages is the gall-bladder, and the formation of gallstones in the bile ducts need not be feared after the removal of the gall-bladder, provided the operation has left these ducts in healthy condition. (4) A very large number of observations are now on record, which prove beyond doubt that gallstones re-form very rarely after the approved operations for their removal. (5) It is not the mere presence of gallstones in the bile passages which produces the clinical manifestations and the dangers of the disease: it is the presence of inflammation, due to infection, and the gallstones are simply an exciting cause of the inflammation. Jaundice does not occur in more than about 20 per cent. of cases of cholecystitis with gallstones, and because of the absence of jaundice the failure to recognise an otherwise well-defined condition is common. When the common duct becomes obstructed by stones, we have no longer a local gall-bladder affection—infective inflammation of the whole bile duct system—cholangitis—may occur with most dangerous consequences. The infection may also involve the pancreas, through its ducts, with dangerous results. Medical treatment can accomplish only two things in gallstone disease—it may be preventive and palliative; never radical. Medicine can reduce the inflammation in the bile tract, and thus relieve symptoms, and possibly cause the stones to become latent. Gallstones in the common duct may even become quiescent for long periods, the duct dilating, the inflammation and swelling of the mucous membrane subsiding, and the bile flowing freely past the stone into the intestine. The author had almost believed in the disintegration of gallstones himself, because of one of his cases, but later developments brought him back to the opposite opinion. Where attacks of cholecystitis have given rise to adhesions to stomach and bowels, relief can only be given by surgery—in fact, dyspepsia is often a surgical disease, a point to be kept in mind. It has been found that by introducing a gallstone into the gall-bladder of a healthy dog under strict asepsis, the gallstone was dissolved in from six to twelve months, but if there was any cholecystitis the stone was not dissolved. As cholecystitis is always present in some degree with gallstones—and certainly where they cause symptoms—no means can be found of dissolving them in the gall-bladder. (6 and 7) What shall we do surgically with this offending organ? Mayo says that a gall-bladder once infected is always infected. The first indication in operating for gallstone disease is to relieve an infection by pus-forming organisms and drainage of the infected biliary tract; the removal of the gallstones is of secondary importance. The easiest and safest way to drain the bile passages is through the gall-bladder itself. If the gall-bladder from long continued disease be thickened and shrunken, and far removed from the surface by gradual contraction, the difficulties of drainage through it may be greater than those of removal. If removed, the bile duct should be drained through either the hepatic or common ducts—not an easy matter. Where the cystic duct is not patent and the gall-bladder contains no bile, the latter may be removed, as it is useless for drainage, and in such a case drainage of the bile ducts is not demanded. Chronic inflammatory disease of the pancreas, accompanying common duct inflammations, is quite frequent, and is much benefited by continued drainage of the bile outside for a considerable period, usually through a gall-bladder fistula. The head of the pancreas is sometimes found so hard as to simulate a mass of stones or a carcinoma. The practical application of our discussion is simply this: Cholelithiasis, like appendicitis, is a surgical disease, and, as in appendicitis, early and uncomplicated operations are devoid of risk. Patients whose gallstones are not readily set at rest by medical and hygienic treatment should be sent to the surgeon before the outlying ducts are involved. In that stage, whether the surgeon elect to do cholecystectomy or cholecystostomy, the results will be extremely good, although in the light of our present knowledge, cholecystostomy should be the operation of choice.

One Hundred Cases of Gastro-Enterostomy for Simple Ulcer of the Stomach and Duodenum.

Moynihan (*Annals of Surgery*, June, 1904) attempts an analysis of his first hundred cases of gastro-enterostomy. He admits that the earlier records were imperfect; many observations which would now be made were omitted. The mortality was two—*i.e.*, 2 per cent. Eighty-five cases were operated upon for chronic ulcer with intractable dyspepsia, or dilated stomach, with one death. Fifteen cases were operated upon for profuse and recurring hæmorrhage, with one death; 56 were females and 44 males; youngest, 17; oldest, 62. The average age was 35. In 10 cases the induration around a chronic ulcer was so marked that he recorded the presence of a " tumour." In two of the cases, with thickening of the pylorus, the malformation was probably congenital. In 58 cases the presence of a single ulcer or of the scar of a single ulcer was noted. In 20 cases there were two ulcers, in four cases three ulcers, and in seven cases the ulcers are described as multiple. In the later experience, ulcers were found on the posterior wall of the stomach, which would have been overlooked in the earlier cases. Duodenal ulcer alone was found in nine cases, and with one or more gastric ulcers in 13 cases. The great majority of the ulcers were in the pyloric third of the stomach. Adhesions (in 22 cases) varied greatly in extent and in complexity. In two, where perforation had been diagnosed, the whole stomach was densely adherent, and could only be cleaned with difficulty, to allow of a gastro-enterostomy being performed. The fatal case among the 85 operated upon for ulcer was from a strangulated internal hernia; nearly all the intestines had passed through the opening in the transverse meso-colon into the lesser peritoneal cavity, and had become strangulated by the margins of the opening. In many cases intractable dyspepsia was the chief symptom; many complained that the trouble came on in " attacks." Vomiting had been observed as a repeated occurrence in 44 cases. Hæmatemesis had been recognised, apart from those cases operated upon because of the hæmorrhage, in 21 cases. Melæna was observed alone in three cases, in all of which a duodenal ulcer was found. Hæmatemesis and melæna were observed together in six cases. Pain was the most constant symptom. It appeared sometimes before a meal was finished; sometimes half an hour or an hour afterwards. In all fifteen cases where hæmorrhage was the determining cause of operation, symptoms of stomach trouble had existed before the onset of the bleeding. The recurrence of the hæmorrhage and its quantity were the determining points to treat such a case surgically. The chief factor which determines a hæmorrhage is distension of the stomach. It was present in all these cases. Gastro-enterostomy will go far to securing the arrest of the bleeding. Whether, therefore, the ulcer be excised or not, gastro-enterostomy ought certainly to be done. *Regurgitant vomiting* occurred in three patients. *Gastric tetany* was observed in five cases. *Chest complications* were seen in three cases. Special attention was directed to cleaning and disinfecting the teeth before operation. The anterior operation of Wölfler was performed in five cases, the posterior of Von Hacker in 94 cases, and Roux's operation in one case. In 92 of the cases the result of the operation was as satisfactory as could be wished. In the remaining six cases the after history has not been so good. In all these cases hyperchlorhydria was pronounced before the operation, and proved a source of pain and inconvenience afterwards.

Colotomy and Colectomy.

Paul (*The Medical Press and Circular*, July 27th, 1904) contributes an interesting article on the above. He says there is no need to revive the discussion as to which is the better operation—anterior or lumbar—as the first place was soon conceded to anterior colotomy. Modern colotomy has gained in favour from two causes: (1) Lower mortality; (2) improved artificial anus. The latter has been the more important factor, and it has rendered the patient more independent through being able to attend to himself. The method of Harrison Cripps is that which has met with most favour in England; indeed, Allingham, who advocated a rival method, has now adopted it, except in cases where the sigmoid mesentery is long. One derives from a colotomy (1) relief; (2) safety; (3) comfort. In cases of obstruction, immediate relief is required, and in these cases Paul urges the glass tube method known by his name. Cripps' and Allingham's operations do not provide for the immediate opening of the bowel, but Paul has practised both operations with the aid of the glass tubes, and does not think the risk is increased. The incision may be smaller, and the operation is completed at one sitting. As regards safety, Cripps' operation, with or without the tube, should be selected. As regards comfort, the essentials are: (1) A high operation, a small wound, and opening the highest portion of the colon available; (2) the formation of a good spur; (3) the use of a good plug, and the cultivation of a regular habit of bowels. (The author has adopted a mushroom-shaped aluminium plug, which is figured.) The details of a colotomy by the glass tube method is described. The author is inclined to think that there are only two good colotomies—sigmoid and transverse. Right iliac colotomy he does not like at all. In speaking of colectomy, Paul says it is a great misfortune that malignant disease of the colon is so undemonstrative in its early stages, as it is the least malignant form of cancer that he is acquainted with. After 12 years' experience of his tubes he is confirmed in his opinion that it is the right procedure. The spur is clamped about three weeks after the first operation. A clamp for the purpose, made by Down Bros., is figured.

EAR, NOSE, AND THROAT.

Removal of Semi-circular Canals in Aural Vertigo.

Lake (*Lancet*, June 4th, 1904) recommends removal of the semi-circular canals in intractable cases of unilateral aural vertigo, where drugs have failed to control the symptoms. The operation is performed as follows:—An ordinary radical mastoid operation is performed, with the exception that the innermost portion of the posterior wall is not removed, but the bony opening in the temporal bone is enlarged, forwards, upward, and backward. Anteriorly it is extended into the base of the zygomatic process, and postero-superiorily in such a way that the long diameter of the bony wound is from above, downward and forwards. The malleus and incus lying exposed after the removal of the external attic wall are removed. The burr is now substituted for the cutting gouge, which has been previously employed, and the upper and outer surfaces of the external semi-circular canal in its whole extent are exposed. The antero-external portion of this canal is now followed forwards and inwards until the outer surface of the superior canal is brought into view. The whole of this canal is now removed by cutting it away with a medium-sized burr, leaving only the upper part of the arch untouched. The posterior rim of the external canal is then followed, so as to bring into view the posterior canal, which is burred away entirely. After this the upper surface of the external canal is cut away until the anterior half of the membranous canal is exposed. This is then removed with a small burr, which is afterwards employed to make a medium sized opening into the vestibule. The external meatus is divided longitudinally through its posterior wall, and the wound packed and closed.

Tonsilitis a Cause of Acute Nephritis.

Morse (*Archives of Pediatrics*, May, 1904) points out the neglect which this matter has received. When tonsilitis is considered from a bacteriological point of view, the possibility of it leading to acute nephritis is not surprising, especially when it is remembered how largely streptococci figure in tonsilar inflammations. Four cases are recorded by the author in which tonsilitis was followed by acute nephritis, two being adults and two children. In each case it was possible to absolutely exclude scarlet fever, or previous renal disease. The importance of careful examination of both heart and urine in tonsilitis is insisted on.

The Results of Different Measures in the Treatment of Cancer of the Larynx.

Botella (*Boletin of Laryn.*, April, 1904), in a review of the various operative procedures, gives the results of surgical treatment as follows:—

	Per cent. of death from operation.	Per cent. recurrences.	Per cent. cures.
Endolaryngeal operation ..	5·7	22·8	28·5
Laryngotomy	7·5	41·5	26·4
Pharyngotomy	8·2	42·5	14·9
Total extirpation	34	23·3	9
Hemilaryngectomy ..	25	26·7	14

Favourable results have been reported by various observers from the use of X and Becquerel rays, but no comparative statistics are given. The author's conclusion is to the effect that as yet surgical measures offer the largest prospect of relief.

The Radical Cure of Fronto-Ethmoidal Suppuration.

De Stella (*La Presse Oto-Laryngol. Belge*, April, 1904) gives particulars of an operation which he has devised for cases of fronto-ethmoidal suppuration. An incision is made along the inner third of the supra-orbital border, and then curved downwards along the lateral surface of the nose so as to fully expose the nasal process and unciform process of the maxilla, and the os planum. The entire floor of the sinus is destroyed—outward to the external diverticulum and inward to the line of junction of orbital and cerebral plates.

Next the nasal process of superior maxilla and even a part of unciform bone is resected, but the osseous lachrymal canal and os planum are left intact. When this is done, the frontal sinus is easily curetted, and then the ethmoid resected.

Zinc chloride, 10 per cent., is applied to the interior, a tampon of gauze introduced into the vertical portion of the sinus, and the soft parts are sutured.

He claims for this method that it allows free access to the sinus, and enables the diseased ethmoid to be broken down easily, while the deformity is insignificant.

Recurrences are reduced to a minimum, but a light degree of astigmatism often results from the sacrifice of the pulley of the oblique muscle.

Treatment of Hay Fever.

Parsons (*Medical Record*, July 10th) discusses the treatment under three separate heads:—(1) Constitutional; (2) local; (3) treatment of the exacerbation. In building up the nervous system he advocates the daily morning cold plunge, followed by vigorous rubbing with a coarse towel. The use of the bath should be commenced several weeks before the usual time of the hay fever to make its appearance. Suitable clothing and shoes should be worn to prevent taking cold. The sleeping room should be well ventilated. Nerve tonics, such as strychnine, arsenic, and phosphorus, are indicated. A thorough examination should be made of the nose and naso-pharynx of every patient suffering from hay fever, with a view to correcting any existing chronic inflammatory condition or obstructive lesion.

It is advisable to begin the treatment of local conditions in the spring, or at least several weeks before the time when the hay fever usually makes its appearance. This plan of treatment may need to be renewed at the same period for two or three years before marked improvement in the severe cases can be expected. In the treatment of the exacerbation, it is well to give due attention to the possibility of uric acid being a factor in the causation of the malady. The internal administration of the saccharated extract of the dried suprarenal gland, and the active principle of the gland in the form of a nasal spray, are very efficient. By some, suprarenal extract is considered a specific. It is given in 5 gr. doses every two hours, day and night, until dizziness or palpitation is observed, or until the vaso-motor paralysis in the nasal mucous membrane is controlled. Then the intervals between doses are increased.

Solution of adrenalin is best used as a spray in the proportion of 1-5000 in normal salt solution. Its use may be preceded by a milk alkaline solution and followed by a bland oily spray. The use of camphor, the cold spinal douche, the ice bag applied to the back of the neck and the upper portion of the spine are mentioned as adjuvants. The use of opium, alcoholic stimulants and cocaine should be avoided.

THERAPEUTICS.

Hyoscine in the Treatment of the Morphine Habit.

Buchanan (*American Journal of Insanity*, April 1904) briefly outlines the different methods which have been employed in the treatment of the morphia habit, and then proceeds to record his experience with hyoscine hydrobromate in this connection. He gives the following outline of the treatment as the one he usually adopts, but remarks that the condition of the patient may require some modification. If possible, the patient is kept under observation for a few days, and the amount of morphine and cocaine is reduced to what will keep him comfortable. The night before beginning the hyoscine, 6 to 8 grains of calomel are given, followed by a saline in the morning. The usual morning dose of morphine is given; but in the afternoon, when the next dose of morphine is asked for, hyoscine is given instead, and from this time for 36 to 40 hours the patient must be kept under the influence of of the drug, 1-200 to 1-100 gr. being given every two or three hours, according to the condition of the patient, but never enough to completely stupify him. The patient must be kept in bed, with a nurse in constant attendance. If the patient is robust, and bears the treatment well, nothing but hyoscine is given; if, however, the pulse becomes weak or irregular, strychnine is given. The pulse is usually lowered in rate, and as a rule is of good volume, but occasionally it intermits or becomes weak; in such cases strychnine is indicated, and the heart's action will become normal after the hyoscine is omitted. Diarrhœa, nausea or vomiting may occasionally occur, but there is usually rarely any trouble with the respiration. Milk and water must be given at regular intervals. If the patient becomes nervous and sleepless, trional or chloral hydrate with bromide of soda may be used with good results. If the patient is put on large doses of bromide of soda for a few days preceding the treatment, or if hyoscine is given in larger doses at shorter intervals, there will be less nervousness, and he will pass the time in deep sleep. The after treatment is the same as in other methods: tonics, nourishing diet, and rest. It is impossible to say how exactly the hyoscine acts, but it does not matter how much morphine alone or in combination with cocaine the patient has been accustomed to take, he does not miss the morphine after he is once thoroughly under the influence of hyoscine, nor does he crave for it after the treatment is finished. Under the treatment the patients do complain sometimes of feeling weak, the dryness of the mouth and throat is annoying, and a few complain of backache and other minor troubles, but none complain of the pains incident to the sudden withdrawal of the morphine.

Treatment of Mucous Colitis.

Ruyon (*New York Medical Journal*), in discussing the treatment of this obstinate complaint, remarks that most cases are the result of mechanical irritation due to chemical processes in the intestinal canal, or to fermentative processes, the results of germs in the intestine. Dieting is the most important part of the treatment, although suggestive therapeutics are of importance and should be constantly employed. If constipation be present, he advocates the use of liquids, preferably beef juice and broths, made more nutritious by the addition of bread or cereals, and strained. He considers milk injurious, as favouring the formation of scybalous masses, thus aggravating the constipation, and predisposing to fermentation when diarrhœa is present. All foods which tend to mechanically irritate the bowel should be avoided; if diarrhœa be present, then a dry diet is best, consisting of light toasted bread or soda biscuit, crackers or rice, broiled meats in moderation, chicken or game. Tea is also allowed in moderation. After all symptoms have disappeared the patient is allowed to have any food simply prepared and easily digested which contains no coarse substances; this excludes oatmeal, pastry, fried stuffs, and sweets. Cold baths, massage and electricity (the latter for its mental effect) should be employed. All irritating purgatives must be avoided, but the patient should take enough Epsom salts each morning to ensure a sufficient elimination. The local treatment advocated consists in the patient one hour before retiring having a warm normal saline enema, to cleanse the bowel. One hour later the following should be injected into the bowel:—Iodoform, gr. 5; bismuth subnitrate, gr. 10; olei amygd., dulcis, aquæ calidæ, aa one ounce. This must be retained, as the oil is soothing, helps to overcome the constipation, and prevents the formation of scybalous masses. If diarrhœa be present, less of the oil should be used, and mucilage of acacia be added to the mixture.

Hæmoptysis.

Milton (*British Medical Journal*, March 10th, 1904) divides cases of hæmoptysis into three classes or rather three stages, and recommends treatment according to the stage. Rest is of the first importance in any stage. If the hæmorrhage be the first symptom of pulmonary tuberculosis, rest in bed until the hæmoptysis ceases, and then gentle exercise, the latter, according to the author, securing the distribution of the blood to the other parts of the body, and thus diminishing the tendency to hæmorrhage. Food should be moderate in amount and easily digestible. The same treatment should be adopted in cases where the signs of consolidation are present. Where, however, the hæmoptysis occurs in the stage of cavity formation, rest in bed with absolute quiet must be enjoined; hot water bottles to the feet, and hypodermic injection of gr. ¼ of morphine, to be repeated if necessary; a piece of ice to suck is refreshing and quieting. After the hæmorrhage has ceased, the diet must be light and non-stimulating, avoiding alcohol. If there be evidence of the bronchial tubes being blocked with blood, morphine should be avoided, as it is essential that the bronchi should be emptied by coughing. In a fourth class of case, if the patient be plethoric, blood pressure should be lowered by full doses of magnesium sulphate, thirty grains of sodium salicylate and a moderate non-stimulating diet. Stroud in *Merck's Archives* points out that ergot raises arterial pressure and therefore is injurious in pulmonary hæmorrhage. He also recommends rest, morphine and ice; and if the hæmorrhage be unchecked the best remedy is calcium chloride. The effect of this drug is more permanent than that of any other. It may be prescribed as follows:—Calcii chloridi, glycerine aa one ounce, aqua destil. ad one pint. Sig.; one tablespoonful three or four times a day. Or codein sulphatis, gr. ¼; ext. suprarenal, gr. 3; calcii chloridi, gr. 15; ft. pulv. in capsule. Sig.; one capsule three or four times a day.

"CHARLEMOUNT" (Sydney) PRIVATE HOSPITAL, 24 Darlinghurst-road (opposite Macleay-street).—For surgical and medical cases. Fees, from £3 3s.—Miss McGahey, late Matron, Royal Prince Alfred Hospital. Telephone 433 William-street.

CORRESPONDENCE.

London.

(FROM OUR OWN CORRESPONDENT.)

The Prevention of Disease—Medical Defence Union—Anti-Typhoid Inoculation—Royal Commission on Tuberculosis—Health of Miners in Cornwall—Vienna General Hospital—Hospital Appeals in London.

Dr. Clifford Allbutt, Regius Professor of Medicine at Cambridge, embraced the opportunity recently offered him, on the occasion of the opening of a public dispensary at Leeds, to direct attention to the increasing importance of prophylaxis. The new dispensary is equipped according to the latest improvements in medical science, and has been erected at a cost of £33,000. In the course of his address Professor Allbutt said that the building was an admirable one in every way, and fully up to date in all the details of its arrangements. He was specially interested in, and particularly pleased with, the elaborate department which was devoted to dentistry. He pointed out that great evils, not merely those of digestion, arose from the neglect of dental surgery. Insidious diseases came from the neglect of the mouth, and the dental department—an original and new departure—was of the greatest possible interest. Members of his own profession had been engaged since he entered it in destroying their own means of livelihood by preventing disease, and had attained very remarkable success. Diseases which were once rampant were now ceasing or becoming much less. Typhus had by some of them never been seen. Typhoid fever had been reduced to a nominal amount, and there had been a reduction of pulmonary consumption all over England. There had been extraordinary discoveries as to the nature of malaria which had changed the face of important countries. He suggested that by extending the knowledge as to the prevention of disease, they would in time have no enemy but old age to counteract. He urged that preventing disease was more congenial than curing it, and suggested that a rise of the standard of general health would be achieved by the careful study in that institution of the origin and causes of disease. He felt that with such an institution as the Leeds General Infirmary in their midst they would hear less and less of physical degeneration, and the advancement of disease as far as Leeds itself was concerned. Professor Allbutt was thanked, on the motion of the Lord Mayor of Leeds (Mr A. Currer Briggs), seconded by Mr. Charles Lupton, for his address.

The annual report for 1903 of the Medical Defence Union has just been issued and is full of interesting information. During the period covered by this report over 1000 cases have been under the consideration of the Council, and a large number involving less important questions have been dealt with directly by the General Secretary. The report points to a steady accession of members, and justifiably claims this progressive increase as satisfactory evidence that the Union is fulfilling useful work and is appreciated by the profession. The solicitor to the Union is of opinion that each year brings with it more conclusive testimony to the wholesome fear in which it is regarded by speculative litigants. As regards the attitude taken by the Union towards the Medical Defence scheme of the British Medical Association, the Council states that in its course of action it has only adhered to the opinions expressed in 1898, when the British Medical Association at the annual meeting in Edinburgh decided by a considerable majority that the work of defence was already carried on so ably that there was no necessity for the Association altering its laws in order to provide for such work. The report is worthy of perusal by all who are concerned in the welfare of the medical profession.

The Army Council has appointed the following committee to consider the whole subject of anti-typhoid inoculation:—Dr. James Galloway and Colonel David Bruce, of the Advisory Board for Army Medical Services; Dr. Bruce Low, of the Local Government Board; Dr. Wright, Pathologist to St. Mary's Hospital; Dr. Caiger, Medical Superintendent of the South-West Fever Hospital; Major Leistman, Professor of Pathology, Royal Army Medical College; Dr. Martin, Director of the Lister Institute; Professor McFadyen, of the Lister Institute; and Dr. William Bullock, Bacteriologist to the London Hospital. Lieut.-Colonel Skinner, of the Royal Army Medical Corps, has been appointed secretary to the committee, and Dr. Martin has been chosen its chairman. The question of inoculation is to be considered from the broadest possible point of view, and not with reference to any particular serum.

The Royal Commission appointed to inquire into the relations of human and animal tuberculosis has issued an interim report. The Commission was asked to consider:—

> "1. Whether the disease in animals and man is one and the same. 2. Whether animals and man can be reciprocally infected with it. 3. Under what conditions, if at all, the transmission of the disease from animals to man takes place, and what are the circumstances favourable or unfavourable to such transmission."

The greater part of this reference was directed to the view which had been expressed that the bacillus which gives rise to tuberculosis in the bovine animal is specifically distinct from the bacillus which gives rise to tuberculosis in the human being, and that, therefore, the presence of the bovine bacillus, in the milk or flesh of the cow, consumed as food by man, is not to be regarded as a cause of tuberculosis in the latter. As the result of introducing into the body of the cow, heifer or calf, either through the alimentary canal or directly into the tissues by subcutaneous injection, tuberculous material of human origin collected from upwards of twenty different sources, the Commission came to the conclusion that the disease set up in the animal by material of human origin when compared with that induced by material of bovine origin is identical both in its broad general features and in its finer histological details. No character by which the one was distinguishable from the other could be discovered, and the post-mortem appearances presented by bovines infected with tuberculous material of human origin did not differ from those of ordinary bovine tuberculosis. The Commissioners justify the issue of this report by the striking results which have been already obtained. They say in conclusion:—

> "We defer to a further report all narration of the details of our experiments (and we may say that up to the present time we have made use of more than 200 bovine animals) as well as all discussions, including those dealing with the influence of dose and of individual as well as racial susceptibility, with questions of the specific virulents of the different strains of bacilli, with the relative activity of cultures of bacilli and of emulsions of tuberculous organs and tissues, and with other points

> In that report we shall deal fully with all these matters, as well as with the question why our results differ from those of some other observers. Meanwhile we have thought it our duty to make this short interim report, for the reason that the result at which we have arrived, namely, that tubercle of human origin can give rise in the bovine animal to tuberculosis identical with ordinary bovine tuberculosis, seems to us to show quite clearly that it would be most unwise to frame or modify legislative measures in accordance with the view that human and bovine tubercle bacilli are specifically different from each other, and that the disease caused by the one is a wholly different thing from the disease caused by the other."

A Blue Book has been issued containing the report to the Secretary of State for the Home Department on the health of Cornish miners, by Dr. J. S. Haldane, F.R.S.; Mr. J. S. Martin, his Majesty's Inspector of Mines for the South-Western District; and Mr. R. Arthur Thomas, manager of Dolcoath mine. The report contains the following summary of the results of the inquiry:—1. The death rate among miners living in Cornwall, which has always been high in the case of men over 40, has greatly increased during the last few years among men of 25 to 45. 2. The excessive death rate is due entirely to phthisis and other lung diseases. 3. The recent increase in the death rate is due to the deaths of men who have worked rock drills. 4. Nearly the whole of the deaths of rock-drill men were due to "phthisis," and, of the cases examined, at least 74 per cent. were tubercular. 5. The predisposing cause of the excessive mortality among the metalliferous miners from lung diseases is evidently the inhalation of stone dust. 6. The dust is produced in the drilling of dry holes by rock drills, in blasting, in handling the ore, and in other ways. 7. The dust produced by rock drills can easily be prevented by even a very small water jet. The dust from blasting in close ends can be laid by a powerful jet of water and air, and can in any case be avoided by the men. The inhalation of dust produced by blasting on the stopes can also be to a large extent avoided, while the dust produced in handling the ore can be mostly prevented by keeping the workings damp. The following recommendations are submitted:—1. That the use of percussion rock drills in hard stone, without satisfactory precautions for preventing the dust being inhaled by the men, be prohibited in all mines. 2. That special rules be established by the management of every metalliferous mine for the carrying on of the work in such a manner as to reduce to a minimum the inhalation of dust. 3. That special rules be established rendering it obligatory on the part of the owners of metalliferous mines to provide and maintain in a suitable and cleanly condition a reasonable number of sanitary receptacles for the use of the men in case of necessity underground, and also on the surface, and rendering it a contravention of the Act to unnecessarily pollute any part of a mine with human fæces.

On June 21st the Emperor Francis Joseph laid the foundation-stone of a new General Hospital in Vienna, which is intended to replace the famous Allgemeine Krankenhaus in the Alserstrasse. This institution when completed will be the largest hospital in Europe. It is to consist of 40 pavilions, of which, however, the 18 clinical institutes will be so many separate large hospitals, with the best possible arrangements for teaching purposes, demonstrations, etc. There will be room in each operating amphitheatre for 250 students. In the clinical institutes for infectious diseases the patient will be separated from both professor and students by a glass screen. Every clinical institute will have a large ambulatorium, and in each there will be flat roofs, where patients may lie in the open air whenever weather and temperature allow it. The whole area of the new hospital is nearly 60 acres. Forty-eight acres, or about four-fifths of the total area, will be turned into gardens. It is estimated that the new hospital will cost upwards of two million pounds sterling.

A glance at the following table shows the colossal demands that have been made on the charitable public of London within the past 18 months by hospital authorities:—St. Bartholomew's, £500,000; King's College, £300,000; London, £100,000; Charing Cross, £85,000; Guy's, £80,000; Tottenham, £50,000; Bolingbroke, £50,000; Soho, £50,000; Hampstead, £50,000; Waterloo, £50,000; City Hospital for Women, £30,000; West Ham, £25,000; North Eastern Children's, £25,000; total, £1,395,000. These sums are all for building or extension schemes, and are quite apart from the ordinary appeals for working expenses. To this large amount has now to be added a further item of £340,000, which the governors of St. George's Hospital have decided must be raised to rebuild the hospital on its present site. Some time ago the financial sub-committee of this hospital reported in favour of its removal, but the general committee rejected this finding, and its opinion was confirmed by the governors at a meeting held at the Westminster Palace Hotel on June 21st. Whether St. George's Hospital ought to remain where it is or be removed some distance away from its present central but expensive situation is a question about which there is room for some difference of opinion on general grounds; but, from the financial aspect, it is a serious matter to propose to the public that they shall somehow subscribe upwards of one-third of a million more money for rebuilding purposes than the large amount which the above schedule shows they have already been asked to provide for other institutions.

BRITISH AND CONTINENTAL HOSPITALS.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—Both in London and Vienna I have spent much time at the hospitals, being, of course, more particularly interested in the departments devoted to my own specialty. I was very much struck with the thoroughly up-to-date equipment of the London Hospital in particular. The out-patient department seems to me simply perfect, the only criticism one could make being that there are too many patients to be seen to in a given time and not sufficient skilled assitance; in fact, it is the old trouble with which we are familiar at the Royal Prince Alfred Hospital—the need of clinical assistants really capable of rendering assistance and who will attend regularly. The out-patient department at St. Thomas's is also very conveniently arranged and well ventilated. The operating theatres at this hospital, I think, must be the most perfect in London. Here I had the privilege of seeing Mr. Charles Ballance do some of his mastoid operations, the first operation being followed after a week by a second for skin grafting, and in some cases by a third, after another week, for the removal of the dead graft when it had done its work of sowing the raw surface with epithelium. I also saw some of these cases done by the same surgeon at a private hospital. At the National Hospital for Paralysis, Queen's Square, I attended operations by Sir

Victor Horsley and Mr. Ballance, in both instances for cerebral or cerebellar tumours, the bone being removed one day and the dura opened and tumour removed two or three days after. Before I leave London I hope to see Mr. Ballance do his operation for accessory facial anastomosis for facial paralysis. He showed me one case which had been done 12 months before, where the result was very satisfactory. At the Golden Square and Gray's Inn Road Hospitals I received great kindness from the various members of the staff, who afforded me every opportunity of seeing their work. At the former hospital I was much struck by the very thorough operation of Dr. Lambert Lack for the removal of suppurating ethmoidal cells, and by the mastoid operation as performed by Mr. Charles Heath. This latter is in marked contrast to that practised by Ballance, being done through the smallest skin incision possible and with special care not to remove the mucous membrane from the interior of the tympanum. No grafting is done, and the cavity is not packed, a large drainage tube being passed down the split meatus and the cavity irrigated frequently. I am told that by this method better hearing power is preserved than after curetting and grafting, but I had not the opportunity of testing any of the cases which had been treated by this method. This operation leaves hardly any trace in the shape of visible scar, and in the hands of Mr. Heath is very successful in curing the suppuration. Performed by a less skilled operator, however, I should fear there would be a risk of leaving behind some focus of suppuration in the mastoid cells, and personally would prefer the freer operation of Ballance. One afternoon I spent very profitably at the "Polyclinic," when Mr. Herbert Tilley gave a very interesting clinical lecture, well illustrated by cases, on "Tertiary Syphilitic Lesions of the Nose, Mouth and Throat."

My visit to Vienna was, of course, very interesting. I always devoted my mornings, beginning at 8 o'clock, to the clinics, and my afternoons and evenings —to say nothing of nights—to studying the manners and customs of the lively Viennese. My first business was to make the acquaintance of Professor Politzer, who kindly allowed me to attend, as a visitor, several of his post-graduate lectures, and afforded me opportunities of seeing several operations on the ear by himself and his assistants. Politzer's method of teaching is excellent. A dozen or so patients are sitting along a table, with ear specula in position. The Professor passes from one to the other, draws with crayon on a block of cartridge paper what he sees, makes a few notes on the margin, and pins it to the patient's shoulder. The students follow, compare what they see with the sketch, and ask for any further information they require. When all the patients have been examined, the students take chairs and the Professor gives a clinical lecture on the cases before them. Professor Politzer's skill with the crayon is well known, and is much appreciated by his class. Through the kindness of one of the assistants I was fortunate enough to secure some of these rough sketches of what may be seen through the ear speculum.

Professor Politzer retains all the vivacity of youth, and is a handsome and very young-looking man, especially when one remembers the long period during which his name has been as a household word with our profession. He speaks several languages and nearly always repeats his sentences, when lecturing, in English or French, or both when needed, for the benefit of foreign students. I have brought with me a recent and very good portrait of the Hof-Rath. During his remarks on a mastoid operation he had just done, he said that this was a second operation, the first, which was done "by Stacke," not having been successful. I fancied he smiled as he said this, but on inquiry I found that he meant that it was by the method "of Stacke," not by Stacke himself, and that the operation was really done by one of his own assistants.

I saw one of these assistants tie the jugular for infective lateral venous thrombosis, and it struck me at the time that he would have been wiser had he left that operation to someone more familiar with general surgery. This feeling was increased when a puncture was made with a scalpel into the knee-joint of the same patient, flaky serum evacuated, and no irrigation or counter opening attempted.

The out-patient arrangements at the Allgemeines Krankenhaus I consider very defective. The patients crowd round the professor or assistant, watch everything that is done, and hear every remark. Adenoids are removed without an anæsthetic before an admiring crowd of out-patients and in an atmosphere you could cut with a knife. My impression on the whole was that diagnosis was the main point, treatment quite secondary; and, as in the case in every public hospital, the patients are too numerous for proper attention to be possible.

At the Poliklinik I was interested in a series of cases being treated with urbantsichs (I don't think the end of the name is quite right), graduated Eustachian bougies combined with external vibratory massage. The Professor assured me he obtained permanent good results in the way of opening up a narrow tube by this treatment.

Vienna is a grand place for teaching, but were I a patient I would rather be treated in an Australian than an Austrian hospital.—I am, etc.,

GEORGE T. HANKINS.

Eastbourne, June, 1904.

ARE "SECRET COMMISSIONS" KNOWN INSIDE THE MEDICAL PROFESSION ?

(To the Editor of the Australasian Medical Gazette.)

Sir,—In some parts of the State of New South Wales it is the custom for members of the medical profession to allow people of the humbler classes to pay so much per annum for medical attendance.

A COMEDY IN TWO ACTS.

Act I.—Scene I.

F. enters doctor's consulting-room.

F.—Doctor, I am paying you 6s 6d per quarter.
Dr. A.—Yes ; I know.
F.—I think it is too much.
Dr. A.—Well, I do not.
F.—Doctor, will you not take me for less ?
Dr. A.—No ; not one penny less. If I make any alteration, it will be an increase.
F.—Well, I can get attendannce for much less.
Dr. A.—Very well ; good night.

[Interval of six weeks.]

Act II.—Scene I.

Dr. A. (meeting F.)—Good morning ; what are you paying for attendance now ?
F.—The same as I had to pay you.
Dr. A.—That is all right.
F.—But I am to get a present.
Dr. A.—A present ! What do you mean ?
F.—I am to get some of my money back.

Dr. A.—Yes; how much?

F.—I do not know exactly; but I have been promised some back by Dr. B.

Dr. A.—All right; good-bye.

Alas! The comedy is too true. An episode in real life, told in the original words. A. and B. are both members of the B.M.A.—I am, etc.,

Sydney. JOHN B. NASH.

MEDICAL PRACTITIONERS' WIDOWS AND ORPHANS' FUND.

(To the Editor of the Australasian Medical Gazette.)

Sir,—In reference to the draft propositions for formation of the above fund, published in your last number, I received the following letter from the General Manager of the Mutual Life Insurance Company of New York (Australasian department), which is one of the leading institutions of mutual life insurance in the world. From the letter members will perceive that the scheme may be set on foot as soon as possible.

I hope that the Council and the Association will approve of the establishment of the fund at an early date.—Yours faithfully,

JAMES ADAM DICK,
B.A. (Syd.), M.D., F.R.C.S. (Edin.).
Randwick, N.S.W., Sept. 20th, 1904.

[COPY].

Martin Place, Sydney,
Sept. 1st, 1904.

Dear Dr.,—My attention has been called to the August issue of *The Australasian Medical Gazette*, in which it is proposed to establish a Medical Practitioners' Widows and Orphans' Fund.

I wish to inform you that the draft propositions contained therein meet with my approval, and the Company is prepared to carry them out, so far as the insurance side of the matter is concerned, to the approval of the Council of the British Medical Association.

I trust that you will be successful in obtaining the Association's approval of the scheme, and in the event of your doing so I shall at all times be pleased to give you any assistance in my power regarding the matter. —Yours truly, RICHARD RENNIE,
General Manager.

To J. Adam Dick, Esq., M.D.,
Randwick.

LIFE INSURANCE WITHOUT MEDICAL EXAMINATION.

(To the Editor of the Australasian Medical Gazette.)

Sir,—I wish to inform you that an agent for the National Mutual Life Insurance Company of —— is now working in my district, taking all cases up to and including £200 *without medical examination*. As the majority of cases secured by agents in these districts are below £200, this means considerable saving to the company at our expense. I have refused in consequence to examine for the company, and would be glad to hear your opinion in the matter.—I am, yours faithfully, F. S. ZLOTKOWSKI,
M.B., Ch.M. (Syd.).
Mungindi, N.S.W., Sept. 1st, 1904.

[The practice of insuring lives for small sums without medical examination is not a new one. It has been adopted by some of the large companies in England, and, it is said, has been so satisfactory that one at any rate of these companies has recently decided to accept risks for £500 without medical examination. Under these circumstances we do not think our correspondent is acting in his own interest in refusing all work for this society.—ED. A.M.G.]

THE DURATION OF INFECTIOUSNESS OF SCARLET FEVER.

(To the Editor of the Australasian Medical Gazette.)

Sir,—I shall esteem it a favour if you will give me some idea how long a case of scarlatina is contagious and needs isolation. According to a report in a recent issue of the *British Medical Journal*, in an action against an asylum board, experts seemed to consider that, when throat and nose symptoms had subsided, after a month's isolation, the case was free from infection, no notice being taken of desquamation.

I have lately had a case of a school boy who had a very mild attack, for which it was scarcely worth keeping him in bed. It was twelve weeks before desquamation of hands and feet was completed. The parents grumbled about keeping the child from school, and the general discomfort which resulted from their being kept under the yellow flag.—I am, yours, etc.,

August 28th, 1904. OLD SUBSCRIBER.

[We have been informed that it is not possible to name the time when patients become free from the infection of scarlet fever; but it is certain that no such patient should be regarded as free until six weeks have elapsed since the date of attack. Even then the presence of sore throat, or of discharge from ears or nostrils, is commonly considered to betoken continuance of possible infectiousness. The practical rule, therefore, is that a patient who has suffered from scarlet fever may be regarded as free from infection six weeks after attack, provided the first desquamation has ended, the mucous membranes are healthy, and disinfection of the patient's skin, etc., and of his room and clothes, has been carefully done. Books and toys should be burned.—ED. A.M.G.]

OBITUARY.

Angel Money, M.D., B.S. (Lond.), 1880; M.R.C.S. (Eng.), 1879; F.R.C.P. (Lond.), 1889, Sydney.

We deeply regret to record the sudden death of Dr. Angel Money, which occurred at his residence in Randwick on September 2nd.

Angel Money was born in London in the year 1856, and was educated at Cambridge House School, at Blackheath, near London. He then proceeded to University College, London, and after a distinguished course obtained his degree of M.D. at London University in 1880, and shortly afterwards was admitted a Member of the Royal College of Physicians of London. He was appointed Assistant Physician at the City of London Hospital for Diseases of the Chest at Victoria Park, London, and not long afterwards was appointed Assistant Physician to the Hospital for Sick Children at Great Ormond-street, London. While he held these appointments he was engaged in original work at University College, and it was at this time that he published his researches on the pathology of chorea, his experiments leading him to the view that this disease was caused by multiple emboli in the cerebral vessels. It was at this time, also, that he published his book on Disease in Children, in Lewis's Practical Series, a work which went through several editions and was a favourite text-book on the subject. He used to contribute to the columns of the *Lancet*, reporting the proceedings of the several medical societies in London, and also writing several reviews for that journal.

Upon the death of Dr. Wilson Fox, the Senior Physician to University College Hospital, in 1887, a vacancy occurred on the hospital staff, the first for seventeen years, and Sir (then Dr.) W. R. Gowers, who up to that time had been senior out-patient physician, was appointed to the indoor work, and Dr. Angel Money was appointed Assistant Physician and Assistant Professor of Clinical Medicine. He now devoted all his energies to his work at University College and Great Ormond-street, and resigned his appointment at Victoria Park. He was full of keen enthusiasm and energy both in the investigation of disease and in teaching, and his cliniques at both hospitals were followed by a large number of students and practitioners. He was appointed medical referee to one of the large insurance societies in the City of London, and was rapidly gaining a large consulting practice, chiefly in diseases of children, when his health suddenly gave way, and he was obliged to give up all his appointments. On his recovery he went on a trip to South Africa, and then returned again to London with the intention of resuming his work, but on the advice of his friends he left for Australia, and arrived in Sydney in 1892. Here he rapidly acquired a large consulting practice, and was appointed Physician to the Sydney Hospital for Sick Children, a position he retained up till his death.

Last year in consequence of a serious failure in health he was obliged to again abandon his work, and on his apparently complete recovery he took a trip to Vancouver. He returned again a few months ago, and resumed his practice. Recently, however, he had been complaining of some heart weakness, and his sudden death was attributed to this cause.

His funeral took place on September 3rd at Waverley Cemetery, and a large and representative gathering of his friends and fellow practitioners assembled on the occasion. He has left a widow and two children, to whom we desire to extend our sincere sympathy in their bereavement.

Angel Money was a man of boundless energy and enthusiasm in his work and in his recreations, and was an excellent clinical teacher while connected with the London hospitals. He was a man of brilliant attainments, but distinctly a man of moods. His serious illnesses contributed very largely to hamper him in his work and were responsible for some of his failings, and for his missing that position in his profession which his abilities should have secured for him.

HERBERT CHURCHILL PURCELL, L.R.C.S. (Irel.), 1869; L. *et* L. Mid. K.Q.C.P. (Irel.), 1870, Sydney.

We regret to announce the death of Dr. H. Churchill Purcell, which took place on August 29th, at 13 Jamieson-street, Sydney. He was born at Dublin in 1846, his father being Mr. Theobald A. Purcell, Q.C., afterwards District Court Judge at Limerick. He received his medical education in Dublin, and then practised for a time in New York. After spending some time in India, he went to New Zealand, but later settled in Charters Towers, Queensland, and then moved to Brisbane. In 1891 Dr. Purcell came to Sydney and practised here till his death, first in Woollahra and then in Jamieson-street. About eight weeks ago he was knocked down by a tram in George-street, and the shock acting on a gouty heart, set up a train of symptoms which terminated fatally. Dr. Purcell was not widely known by the profession in Sydney, but to those who were intimate with him he was always a charming companion, full of Irish wit and humour. He leaves a widow and five children, with whom we desire to express our sincere sympathy.

ROBT. KENDRAY ARCHER, M.R.C.S., L.S.A., 1875.

The death of Robt. Kendray Archer, M.R.C.S., L.S.A., 1875, formerly of Moonta and Semaphore, at Bristol, England, has been announced by cable. The deceased practised his profession in the Semaphore (South Australia) district for over eight years, and in 1899 left with his wife and family for England. A brother (Dr. E. L. Archer) resides at Moonta, S. A. The late doctor was of genial disposition, and made a host of friends in South Australia.

Medicine and the State in Victoria.

ACCORDING to a report in the Melbourne *Age* we learn that at the conclusion of the annual meeting of the Melbourne Medical Association on August 27th members entertained the Premier (Mr. Bent) at supper. Dr. D. Murray Morton, the newly-elected president, presided.

The retiring president, Dr. Stanley Argyle, in his address, which preceded the toasts, said that he thought Victoria might congratulate itself on the thoroughness of its organisation for safeguarding the public health. The most obvious reform needed was the transference of the quarantine authority to the Commonwealth in order to bring about a greater uuiformity in quarantine administration. He did not say that up to the present the transferred departments had been marked by any great improvement in administration, but, theoretically, the quarantine arrangements required a central administration just as much as did the affairs of the Defence Department. Another defect was the appointment of busy practitioners to the positions of local health officers by the municipal bodies at salaries absolutely inadequate for the work they were called upon to perform. The remedy would be the appointment of young men specially trained in matters appertaining to public health by one or more municipalities constituting a district at salaries sufficiently high to enable them to live without recourse to private practice. The adulteration of the food supplies with chemical preservatives had received some attention from the State during the past few years, but for some occult reason reform had commenced where it was least needed. Legislation had dealt with the adulteration of wines, beers, cordials, etc., which might be classed as luxuries, and were only consumed in comparatively small quantities when compared with such a universal food as milk, which was the sole dietary of thousands of young children. Every summer hundreds of infants died in Melbourne alone, and the chief cause of that large mortality was attributed by experts to stale and contaminated milk. In hot weather, by the aid of chemical preservatives, stale, partially decomposed milk was distributed throughout the metropolis and fed to the infant population with more or less disastrous results. The evil was accentuated by those sections of the Shops and Factories Act which made it illegal to distribute milk on two days in every week. In the town and in the country the physique of the rising generation was far below what might be expected. Because thousands of people attended football and cricket matches, and because almost everyone took a keen interest in sport, we were accustomed to regard ourselves as an athletic community. Probably not one per cent. of the "barrackers" could follow the ball for five minutes without becoming physically exhausted. We were no more an athletic community than the people of ancient Rome who thronged the benches of the Colosseum were a community of gladiators. The adoption of a thorough system of physical culture and training was needed in our public schools, not as an extra, but as part and parcel of the routine teaching. Every penny spent by the Government in providing efficient teachers and instructors would be repaid to the State a thousandfold by the increased effectiveness and health of its individual citizens. The next step would be the establishment of State aided municipal gymnasia throughout Victoria free to all, so that the young men might continue to keep up what they commenced at school. By that means he believed that much larrikinism, perhaps even much crime, would be prevented. Another function of the State was to protect the community by controlling the education and training of the future practitioner and, by registration, to limit the practice of the healing art to properly trained individuals. Yet under existing laws hundreds of ignorant and unregistered quacks were exploiting the public wholesale and preventing the regular man from earning an honest living. Chinese doctors (?), herbalists, clairvoyants, cancer curers, etc., plied their trade without let or hindrance. Chemists, untrained in the treatment and recognition of disease, treated across the counter all sorts of diseases, from broken limbs to malignant growths, with all the assurance that ignorance alone could justify. It was only just that the unregistered, untrained and ignorant men should be prevented from entering into competition with the men who had complied with the State's requirements as to training and mental equipment.

Dr. D. Murray Morton, in proposing the toast of Parliament, coupled with the name of the Premier, said that the State Parliament, although a young one, had already shown evidence of capacity and energy. The Premier had done something for their University, and none of them would like to see it fall from its present position of pre-eminence among the Universities of Australia. They had to compete with the splendidly endowed universities of Adelaide and Sydney, and they looked to the Premier to do something to keep their University well to the forefront.

The Premier, who met with a warm reception, said the retiring president (Dr. Argyle) in his address had complained that Parliament had not taken up comprehensively the question of adulterations of foods. When Minister of Health, prior to becoming Premier, he (Mr. Bent) had directed Dr. Gresswell to frame a bill to prevent the adulteration ol all kinds of foods, and as Premier he had authorised two analysts to be employed, so that wines, beers, and food should be examined. The Government had a Milk Bill on the stocks, and within the next few days a proposition would be submitted which would have as its object the saving of the lives of thousands of children. The Government seriously proposed—it was in the interests of thousands of children—that milk should be distributed daily in spite of the Shops and Factories Act. He had observed and had felt that the University had been placed at a disadvantage. He had placed in his Surplus Revenue Bill £10,000 towards paying off the £33,000. He, however, wanted the University within the next week or two to say what it would give in return. He wanted it to help the poorer classes, to help the boy with brains who had a poor father and mother, to go into the University, and if that was done he was prepared to give a considerable sum. Dr. Argyle had spoken about so many going to the football matches. He was not in favour of giving footballers everything for nothing. Then they had their rifle clubs and other sporting institutions. They were giving too much to that particular kind of education, and the people now got it all for nothing. He was going to put a stamp on as a charge on that form of physical culture. He considered health to be the first consideration of a Government, and nothing would be wanting on the part of his Government to help the medical profession to preserve the health of the people of Victoria.

The other toasts were "The University" and the Learned Professors. Professor Baldwin Spencer, in replying to the former toast, assured the Premier that the University authorities would respond and show their appreciation of the help he had given them.

FOR SALE.

Allbutt's System of Medicine, 8 volumes, perfect condition, for sale, cheap. Apply Medico, *A.M. Gazette* Office.

Allbutt's System of Medicine, practically new (complete), £8 (cost over £11). Bruck's New Combination Steriliser for Instruments and Dressing, with Double Lamp and Stand complete; only used twice, £2 10s. H.G.B., *A.M.G.* Office.

PRACTICES FOR SALE.

N.S.W.: Prac. in large town, Southern line. Cash income, £600. Appts. £200. Price, £300. Est. 8 yrs.

N.S.W.: Prac. in which £500 yearly can be saved. Price for prac., furn., 12 rooms, 3 horses, everything, £400.

N.S.W.: Prac. nr. Sydney, good town, good climate. Est. 22 years. Price, £300. Strongly recommended.

N.S.W.: Unopp. prac., Southern line. Cash take £500. Only one small lodge. Prompt buyer, £60.

S.A.: Prac. in Adelaide, which for 26 years has averaged £2000 cash annually. This is a general practice, and not a personal one. Good introduction. Price, £1000.

N.Z.—Prac. in Wellington Dis. Average cash income for last five years, £1000; last year, £1325 cash. Est. 10 years. Appts. Hos., £100; lodges, £120. Three months' introduction. Price, £800. Recommended.

N.Z.—Surgical Prac. for Sale, which returns annually £3000 cash. Photos and all particulars of expenses, etc., supplied.

Mr F. W. LOXTON,
16 O'Connell-street, Sydney.—[Advt.]

Hudson's "Eumenthol" Jujubes (Registered) are a Gum Jujube containing the active constituents of well-known Antiseptics, Eucalyptol, Thymus Vulg., Pinus Sylvestris, Mentha Arv., with Benzo-Borate of Sodium, etc., and exhibit the antiseptic properties in a fragrant and efficient form. Sold by all chemists; tins, 1s 6d. Are Antiseptic, Prophylactic, reduce Sensibility of Mucous Membrane. Mr. W. A. Dixon, F.I.C., F.C.S., Public Analyst of Sydney, after making exhaustive tests, says:—"There is no doubt but that 'Eumenthol' Jujubes have a wonderful effect in the destruction of bacteria and preventing their growth. . . . . I have made a comparative test of 'Eumenthol' Essence and Creosote, and find that there is little difference in their bactericidal action."—[Advt.]

PUBLIC HEALTH.

New South Wales.

Health of the Metropolis.—Dr. W. G. Armstrong, the Medical Officer of Health, reports that the 470 deaths of persons belonging to the Sydney metropolitan municipalities registered during August were equal to an annual death rate of 10·9 per 1000 of the population. Corrected by the inclusion of the metropolitan proportion of deaths in the benevolent asylums and hospitals for the insane throughout the State, the rate given becomes 11·74 per 1000. Diarrhœal diseases caused 13 deaths, of which 10 were referred to enteritis and three to diarrhœa. The principal infectious diseases, exclusive of diarrhœa, caused 15 deaths, 5 of which were certified to be due to influenza, 3 to whooping cough, 3 to diphtheria, and 4 to typhoid fever. No deaths resulted from measles or scarlet fever. From cerebo-spinal fever two deaths were recorded, and one from bubonic plague, The mortality from phthisis, which was so heavy in July, receded in August to about its usual monthly level; 40 deaths were recorded from this cause, the average number for August during the five previous years being 43. Respiratory diseases caused fewer deaths than usual in August; 27 deaths occurred from bronchitis, 43 from pneumonia, and four from all other disorders of the respiratory organs. Cancer caused 30 deaths, and diseases of the heart and blood vessels 73. Infantile mortality was very low; 90 deaths of children under one year were registered, a figure equal to an infantile mortality rate of 70 per 1000 births. The principal causes of infantile deaths were:—Prematurity, 23; developmental diseases, 26; respiratory diseases, 14; diarrhœal diseases, 9; and convulsions, 8. Persons attacked by notifiable infectious diseases during August numbered 199, of which 112 suffered from scarlet fever, 67 from diphtheria, 19 from typhoid fever, and one from bubonic plague.

Beri-Beri.—Three members of the Chinese crew of the steamer "Heathburn" were removed to the Coast Hospital on August 24th suffering from beri-beri. It is stated that whilst the vessel was on the voyage from Japan to Sydney, via Ocean Island, 12 of the crew were laid up with the disease. Three of the men died and were buried at sea.

Bubonic Plague.—On August 25th, after an interval of 17 days, a plague-infected rat was discovered at Miller's Point wharf, and next day two infected rats were caught—one in Sussex-street and one under a Darling Harbour wharf. During the early part of this month further discoveries of plague-infected rodents were made, and on September 10th, a young man, a coachman, employed at Eastwood, and living at Annandale, died after two days' illness of bubonic plague. A housekeeper, employed at the same house, also died after a few hours' illness of plague.

Rats in the Foreshores.—The Harbour Trust Commissioners are experimenting with a view of making the wharves ratproof. Crevices in the rubble walls form a convenient refuge for the rodents, and their complete extinction by existing methods is perhaps impossible. The engineer-in-chief to the Trust has brought into use a plan of making the wharves ratproof by means of Monier facing, which, it is believed, will defy all the resources and ingenuity of the rodents. The method is to drive wooden piles side by side along the face of the wharf, and to sheet them with concrete flags bolted to the piles. The flags have been moulded from a mixture of concrete, iron, etc., and when fastened side by side to the piles they give the appearance of a solid concrete wall. To provide such a face to the whole of the wharfage accommodation on this side of the harbour would, it is estimated, cost from £80,000 to £90,000. It is proposed, therefore, to carry out the work in sections as money for the purpose becomes available.

Queensland.

Bubonic Plague.—On August 21st, as a result of the outbreak of plague in South Brisbane, Dr. Ham, Commissioner for Public Health, issued an emergency order on the South Brisbane Municipal Council, and 40 men were put on at the Council's expense to cope with the serious condition of things said to exist. In connection with this outbreak of plague in a fish shop in Melbourne-street, Dr. B. B. Ham, with his assistant, Dr. Tyrie, the Mayor of South Brisbane, and a couple of the municipality's inspectors, made an inspection on August 20th of the block of wooden buildings comprising shops and dwellings bounded by Melbourne-street, Stanley-street, Grey-street and Fish-lane. A close inspection showed great cracks in the pavement, 10 feet below which, and immediately under the shops and dwellings, are the basement rooms, and with a sewer along the road there is apparently little protection against rats. Stables are in some instances established in these basement rooms, and the Commissioner states that they are a menace to health, infected rats having been found there every year since plague first visited Brisbane. Cleansing operations throughout the municipality were commenced at the instigation of the department. On September 5th at a meeting of the South Brisbane Council the action of Dr. Ham, Health Commissioner, in issuing an emergency order in connection with the plague outbreak, was discussed, and it was unanimously resolved—"That this Council objects to and protests against the action of the Health Commissioner in declaring that under section 20 of the Health Act an emergency had arisen, and that a committee be appointed to prepare and forward to the Governor-in-Council a memorial stating the grounds of complaint of this Council." For the week ending September 10th, 1904, at Brisbane the total number of rats and mice destroyed was 323; number of rats and mice examined at bacteriological laboratory, 253; number of rats and mice found infected, 2. At Ipswich, total number of rats and mice destroyed, 103; number of rats and mice examined at bacteriological laboratory, 78; number of rats and mice found infected, nil. Plague in man: Cases during the week ended September 10th, 1904, nil: deaths, nil; discharged from hospital, 3; remaining under treatment, nil.

Victoria.

Infectious Diseases.—The returns relating to infectious diseases in Victoria, laid before the Board of Health on August 31st, showed a general increase of cases during the present year. In regard to typhoid fever, for the fortnight ending August 27th, 1903, there were, for the whole State, 10 cases, with 3 deaths. In the same period this year there were 13 cases, with one death. For the metropolitan area in 1903, there were five cases, with one death, and in 1904, three cases and one death. In August, 1903, there were, for the whole State, 42 cases, with five deaths; this year there were 75 cases, with six deaths. For the metropolitan area in 1903 there were 22 cases, with three deaths, and this year 26 cases, with four deaths. Scarlet fever cases were, for the whole State, 1903, 43 cases, one death; 1904, 70 cases, no deaths. Metropolitan area, 1903, 28 cases, one death; 1904, 49 cases, no deaths.

Diseased Meat at Bendigo.—At Bendigo a a piece of meat which had been cooked for consumption was found by Dr. A. A. Brown, inspector of foods for export, to be infected with "beef measles." "Beef measles" is the cystic form of the tapeworm, which inhabits the human intestines. It is through eating measly beef that the tapeworm is intoduced into the human system. "Measly beef" has hitherto been unknown in Victoria.

Tasmania.

Tuberculosis in Cows.—At the August meeting of the Hobart Local Board of Health, the city officer of health reported that the tuberculin tests of milch cows having discovered a certain proportion of affected cows in the Government herd at New Town, private owners who had announced their intention of submitting their herds to the test had withdrawn; and failing the voluntary adoption of the test, no further steps could be taken to discover tuberculous cows and remove them from milking herds until the test was made compulsory by law. It was suggested that an inspection of all the cows within the city dairies be made in order to discover any cows having any suspicious signs of udder disease, and that if any such were discovered they should be removed from the herds and their milk destroyed.

Vital Statistics.—During the month of July there were 63 deaths registered in the registration district of Hobart, but five of these were persons not usually resident in the district. In the city proper there were 25 deaths, viz., 11 males and 14 females, giving a death rate of 12·16 per thousand per annum. The principal causes of death were:—Phthisis, 3; diabetes, 3; carcinoma, 1; heart disease, 3; pneumonia, 3; old age, 3; and the remainder were of a general character. Ages at death:—5 were under 1 year of age, two between 1 and 5 years, nine between 5 and 65 years, and nine over 65 years. The total number of births registered in the district was 84, viz., 43 males and 41 females. In the city proper, 59, viz., 30 males and 29 females. There were four cases of typhoid notified (one of which was brought from the country).

West Australia.

Smallpox. — Dr. Lovegrove, Principal Medical Officer, returned to Perth from Broome on September 4th, where he went to make inquiries regarding the outbreak of smallpox, which a few weeks ago assumed a serious aspect. He inspected the pearling fleet at Broome, and took all necessary precautionary measures to prevent the spread of the disease. When he left Broome there was only one case in the hospital, the other patients having recovered.

Bubonic Plague.—A case of bubonic plague was discovered at Fremantle on August 26th. The patient was employed in a store in the heart of the town.

DR. H. BAPTISTA'S ELECTRO-MASSAGE INSTITUTE, 112 Hunter-street, Sydney, including Electrical Apparatus and Furniture (7 rooms), is **FOR SALE.** Must be disposed of before the 6th of October owing to Dr. Baptista's leaving Sydney on account of ill-health.

Insanity in Australia.

Queensland.

FROM the annual report of Dr. Hogg, the Inspector of Hospitals for the Insane, for 1903, we learn that on the last day of 1903, 1852 patients were under care in the State institutions for the insane. The number of patients increased during the year by 39—25 females and 14 males. The average annual increase for the last eight years has been 58. Of every 1000 of the estimated population of 515,530 at the end of 1903, 3·59 persons were under care in the State institutions.

Admissions.—The admissions for the year numbered 337—222 males and 115 females. These figures show almost no variation in the total number for the last three years, but the relative proportion of females admitted has gradually fallen during the three years, and is now about one-third of the total.

The following table shows the form of mental disease in the cases admitted during the year:—

	Males.	Females.	Total.
Mania	124	52	176
Melancholia	21	28	49
Dementia	49	18	67
General paralysis	12	1	13
Epileptic insanity	11	11	22
Myxœdema	—	1	1
Imbecility	4	3	7
Idiocy	1	1	2
Totals	222	115	337

Fifty of the patients had been under care in the hospitals before, and 19 of them had relapsed within a year of their discharge. The remaining 31 had each been absent for an average period of three years.

Of the admissions, 50 per cent. were natives of Great Britain and Ireland, and 37 per cent. were natives of Australia. The remaining 13 per cent. comprised natives of various European States, of Asia, and of the South Sea Islands.

The proportion of the population admitted to the hospitals for the insane in Queensland has gradually fallen from 7·10 per 10,000 in 1899 to 6·53 in 1903.

Causes of Insanity.—In 93 cases no clue was found to the real cause of the insanity. In 60 cases, there was excessive use of alcohol; in 32, an insane heredity was ascertained; and 39 patients had suffered from attacks of insanity before. Disease of the skull and brain was accountable for 15 cases, epilepsy for 21, syphilis for 11, mental defect from birth for 6, and the troubles of childbirth for 3. The main point to be noticed is that at least 71 of these cases were due to causes which were quite avoidable.

Discharges.—167 were discharged, 135 as recovered, 31 as relieved, and one as not improved; 40·06 per cent. of the admissions during the year were discharged recovered, and 9·2 per cent. relieved, giving a total of 49·26 per cent. of discharges. The deaths numbered 133, giving a death rate of 7·22 per cent. Of 22 patients who died from tubercle, only 6 were noticed to be suffering from it when admitted.

Leave of Absence.—30 patients were absent on trial at the beginning of 1903, and during the year 83 other patients were granted leave. Of these, 50 were discharged, 4 died during their leave, 33 returned to the hospitals, and there were 26 still on leave at the end of the year.

Expenditure.—During the year the cost of all the institutions was £49,980 17s 10d, this being £904 18s 7d less than in 1902. £4122 9s 4d, or £2 5s 1½d per head of the average number of patients, was collected towards their maintenance.

Accommodation.—A new ward for females was opened in September at Toowoomba, and 80 patients were sent there from Goodna. A ward for males at Toowoomba was opened early in 1904 by the transfer of 60 patients from Goodna. With these changes the overcrowding of the institutions will end for the present. At Goodna the male buildings on the river bank are still in bad repair, but they are being gradually improved. The first built ward in the female division needs reconstruction. All the other hospital wards are in good repair.

South Australia.

Dr. W. L. Cleland in his annual report for 1903 states that the asylum population on December 31st, 1903, numbered 962, which is a decrease of 29 persons below that of the corresponding date for 1902. The greatest decrease is on the male side, being 25, as against four on the female side. The average number resident during the year was 982, and the total number of persons under treatment was 1202.

Admissions.—The number of admissions is practically the same as for 1902, namely, 206. The number of readmissions (23) is considerably smaller; the 206 will, therefore, represent a larger number of new cases. The annual number of admissions is practically the same as the average for the past 25 years; the ratio of admissions per 10,000 of the population has therefore decreased. In 1887 it was 6·05, in 1903 it was 5·67. A feature of the admissions for several years past has been the large proportion of patients in the decline of life, that is, over 60 years of age. During 1903 this feature was still more accentuated, and as a result the proportion of old people in the asylum was much increased. The following table shows the form of mental disorder occurring in those admitted during the year:—

	Males.	Females.	Total.
Congenital or infantile mental deficiency—			
(*a*) With epilepsy ..	2	2	4
(*b*) Without epilepsy ..	8	10	18
Epilepsy acquired	4	3	7
General paralysis of insane	13	—	13
Mania—			
Recent (under 12 months)	29	27	56
Chronic	—	—	—
Delusional	15	7	22
Recurrent	1		1
Puerperal	—	2	2
Senile	3	4	7
Melancholia—			
Recent (under 12 months)	13	20	33
Chronic	—	—	—
Delusional	4	5	9
Recurrent	—	—	—
Puerperal	—	—	—
Senile	1	6	7
Dementia—			
Primary	6	—	6
Secondary	—	—	—
Senile	11	10	21
Organic, *i.e.*, tumors, etc.	—	—	—
Total	110	96	206

Discharges.—The percentage of recoveries was 51·7 per cent.; this is below the average, which is 56·8. The bulk of the discharges were of patients who had been less than six months in the asylum, and the balance, with the exception of eight, had been less than two years.

Deaths.—During the year there were 126 deaths, a percentage of 12·8 on the average number resident. The average since the asylum records have been kept is 9 per cent. The advanced age of the admissions for the past few years has caused the percentage to rise.

Expenditure.—The total expenditure for 1903 was £26,966 15s 11d, being £1214 less than for 1902, and the fees for maintenance were £568 more. The cost for provisions, clothing, and bedding was less by about £700, and salaries and allowances showed a decrease of £437. The cost per head has been reduced from 1s 4¾d to 1s 3½d per diem.

HOSPITAL INTELLIGENCE.

Jubilee Sanatorium, Dalby, Queensland.—The following is an extract from the yearly Government report, extending from July 1st, 1903, to June 30, 1904:—Number of patients from previous year, 24: admitted during the year, 78; total, 102. Number discharged, 72; died, 1; total, 73; remaining at end of year, 29. The average residence during the year was 23·26 per diem. Of the 73 cases, six were found to be non-tubercular. The remaining 67 consumptive cases are tabulated as follows:—

	Cured	Improved.	I.S.Q.	Died.	Total.
Incipient	4	—	1	—	5
Pronounced incipient	7	3	—	—	10
Softening	—	18	3	—	21
Cavitation	1	11	18	1	31
	12	32	22	1	67

In the cured cases, with the arrest of the disease, there was an average weight increase of 17½ lb. In the improved cases, with the amelioration of the symptoms, there was an average weight increase of 14½ lb. The daily average residence of the cured or arrested cases was 146, and of the improved cases 147. Every endeavour is made to keep in touch with the cured cases after their dismissal, but naturally, with increasing difficulty as time passes on. Of those dismissed as cured during 1901, six have been lost sight of, and five (two males, three females) have relapsed. The remaining ten (seven males, three females) are doing well when last heard of, and from some the bulletins are of quite recent date. They are earning their living as follows:—The three women are engaged in domestic duties, and of the seven men, one is a ship steward, one a quarryman, one a teamster, three are at light employment, and one left Australia, in perfect health, in charge of horses for the war in South Africa, where he died of enteric fever. Of those dismissed as cured in 1902, five have been lost sight of and one has relapsed. Of the remaining 11 (seven males, four females) who are enjoying good health when last heard of, the four women are engaged in domestic duties, and of the seven men, four are clerks, one a tobacconist, one a tram conductor, and one a groom. Of the remainder, viz., 22, their dismissal has been so recent (*i.e.*, during 1903 and up to the present time) that any record of them can have as yet little or no clinical value.

Queen Victoria Homes for Consumptives, N.S.W.—At the last monthly meeting of the house committee of the Queen Victoria Sanatorium, Wentworth Falls, and the Home for Consumptives at Thirlmere, the medical superintendent's report at the sanatorium showed that there were 21 patients in residence. During the month three patients had been admitted and three had been discharged. Of the latter, one was much improved and two had the disease completely arrested. The matron's report (Thirlmere) showed that there were 40 patients in the home. During the month nine patients had been admitted, and eight patients had been discharged. One male patient had died. With the exception of three cases, the majority of patients were progressing favourably. The hon. treasurer reported having received a cheque for £267 14s 11d, proceeds derived from a ball; and a cheque for £200 from the Hospital Saturday Fund.

Goulburn Hospital.—At this hospital four candidates who have passed the necessary examination have received their certificates as trained nurses. This is the first occasion on which nurses at the hospital have qualified for certificates.

Bathurst Hospital, N.S.W.—The new operating theatre in connection with the Bathurst Hospital was completed and handed over to the trustees last month by the architect. The building has been erected and furnished at a cost of £1061, and is said to be one of the most complete and up to date in the State.

Wagga Hospital, N.S.W.—The bazaar organised by the ladies of Wagga in aid of the hospital fund, conducted during the whole of the show week, was most successful, the total proceeds amounting to £825.

Kurri Kurri Hospital, N.S.W.—The new cottage hospital established at Kurri Kurri, to serve the residents of the South Maitland coalfield, was formally opened on August 20th by Mr. J. N. Brunker, in the presence of a large gathering, which included colliery managers and delegates from miners' lodges and progress committees. The hospital is a six-roomed cottage, with accommodation for nine patients. The furniture has been supplied by the people, and the finances are in a sound state. Efforts are being made to establish a system of contribution from the miners, that will, with the Government subsidy, place the new institution in an excellent position.

The Coast Hospital, N.S.W.—During the month of August 102 patients suffering from infectious diseases were admitted, whilst the general cases received numbered 181, making a total of 283 patients. The number discharged was 239. Of these, 204 were cured, 30 relieved, and 5 unrelieved, whilst 16 patients died. . There remained in the hospital at the end of the month 318 patients. Of that number 209 were general cases and 112 infectious, the latter consisting of enteric fever 6, erysipelas 17, whooping cough 2, diphtheria 21, measles 2, scarlet fever 56, and mumps 8. The daily average number of patients was 300·54. Five cases were transferred to convalescent homes, 102 were removed from the city to the Coast Hospital by ambulance, and eight to asylums for the infirm.

Women's Hospital, Melbourne. — Some weeks ago it was reported that there were about 450 patients awaiting admission to the infirmary department of the Women's Hospital, but on investigation it was found that the number had been considerably over-estimated. The list covered a very long period. Some of the earlier applicants were dead, some had been treated elsewhere, some had removed from Melbourne, and, from one cause and another, the number at present awaiting treatment was very considerably less than had been stated. At the meeting of the committee recently it was reported that about 300 of the applicants on the list had been written to with the object of ascertaining whether they still desired to enter the hospital, but only 50 had replied.

Brisbane General Hospital.—At the last meeting of the Brisbane Hospital Committee the financial report showed that the maintenance account overdraft at last report was £538 18s, the receipts were £570 4s 2d, and the expenditure nil. The balance at credit was thus £31 6s 2d. The building account had a credit balance at last report of £831 6s. Special contributions had been received as follows:—Moreton district exhibit, sale of produce, 12s 6d; Hospitals Aid Association, second distribution, £482 19s 6d. The medical report for the two weeks ended 27th ult. was as follows:—In-patients: Remaining under treatment at date of last report, 215; since admitted, 146. Discharged: Cured or convalescent, 41; relieved or improved, 70; *in statu quo*, 5; died, 8; remaining under treatment, 237. Out-patients attendances: At the hospital, 1236; at South Brisbane Branch Dispensary, 172. Convalescent Home: Remaining under treatment at date of last report, 9; since admitted, 26; discharged, 16; remaining under treatment, 19.

Hobart Hospital Board.—At the last monthly meeting of the Hobart Hospital Board it was reported that during the month 185 cases had been treated in the hospital, discharged 95, died 10, leaving 48 male and 32 female cases under treatment on August 1st. The daily average number of occupied beds was 87, as compared with 81 last year, 93 in 1902, and 78 in July, 1901. In the out-patients' department, 104 new cases were treated, casualties 23; total attendances, 435. It was mentioned that it was under consideration to have a separate ward for the treatment of children, it being found to be inconvenient to have so many children in the wards with the adult patients.

Launceston Hospital, Tas.—At the last meeting of the Board of General Hospital the medical superintendent reported that during July the in-patients treated numbered 209, and out-patients, 113. Deaths numbered 10. The visiting committee reported that the rooms occupied by the nurses were overcrowded, and it was decided to hire a room near the hospital for the use of some of the nurses. The finance committee reported that £125 had been received in fees during July. The deficiency to end of June last was £633, and to date, £726. The excess of expenditure over income in July was £301. The Government had given a supplementary grant of £250, which would reduce the deficit to end of June to £383. Increased expenditure was due to the increasing number of patients. They had increased from 572 for 1900 (up to August 18th) to 844 up to date this year.

MEDICAL NOTES.

Clinical Afternoon at the Royal Alexandra Hospital for Sick Children, Sydney.—The third clinical afternoon was held on Friday, August 19th, at Valentine-lane. The late Dr. Money presided. Dr. Littlejohn read some notes on a case of tubercular peritonitis that ended in recovery. He also showed the following cases:—An Assyrian child, aged 2 years and 2 months, suffering from well marked rickets, in spite of the fact that it had been suckled to the age of 18 months. A child aged nine years suffering from epileptiform convulsions, associated with the passage of threads from the bowel. The opinion was expressed that this was a case of muco-membranous colitis. Dr. MacMaster showed a case of primary spastic paraplegia in a child aged 13 years; in this case there was also some ataxia of the legs and arms, and slight tremor of the hands. Dr. Menzies showed two brothers, aged 10 and 7 years respectively, suffering from acquired syphilis. Dr. Litchfield showed two boys, both aged 8 years, suffering from progressive muscular dystrophy; also two sisters, aged 16 and 24 years respectively, exhibiting well marked microcephaly. Dr. Harris showed a paraffine nose. The next meeting will be held on Friday, September 23rd.

Hospital Street Collection in Adelaide.—The first street collection taken in Adelaide in aid of a hospital was levied on September 10th on behalf of the Adelaide Children's Hospital, which last year got into financial straits. The amount collected was £603.

The Value of Examinations.—Speaking at the annual meeting of the Society for Child Study in Sydney, Professor Knibbs, in the course of an address, said that he had been at the University for 15 years, and every year he became more convinced that examinations for children were an utter farce. There was no doubt that the whole English system in this direction sacrificed the brain to feats of memory, and many, learning the tricks of memorising, succeeded in passing examinations. If they had trained teachers and a definite curriculum and a proper scheme of education, then the educational advancement of the children could be judged by the teachers themselves, aided perhaps by State officers. This, he added, would avoid the injury of the cramming system, and the making of a child's onward movement dependent on the chance of a few hours.

Japanese Medicine and Pharmacy.—Japanese druggists (according to a London medical journal's correspondent) are said to be of two classes—the one certificated and qualified to compound medicines, the other dealing in drugs and sundries. The native doctors for the most part dispense their own medicines, though a few write prescriptions only, these latter for the most part having studied in Germany and holding a university degree. The metric system is used for both weights and measures. There is a considerable popular demand for household remedies on the lines familiar in England, and many of these correspond exactly with those which have here long since fallen into disuse. Snakes, lizards, frogs, crabs, and other animals are kept in a dried condition in the native drug stores, and enjoy more or less repute as medicinal agents. Secret remedies of various kinds are also to be obtained; face paints and powders and various dentrifices are much in vogue, and plasters to relieve headache and neuralgia are largely employed. Massage is used in rheumatism and in nervous affections, and is to a large extent in the hands of the blind. The manufacture of mineral waters is carefully supervised by the authorities, and fines are inflicted in any case where the official standard of purity is departed from. Foreign pharmacists wishing to practice in Japan must submit their diplomas to the Government, and must obtain a special license to conduct a chemist's business; without this license it is illegal to practice pharmacy in Japan. The medical and dispensing arrangements for the army are kept strictly in the hands of the military authorities.

Pasteur Monument in Paris.—Falguiere's splendid monument of Pasteur, raised by public subscription, was unveiled recently on the Place Breteuil, Paris, in the presence of M. Loubet, and the representatives of the Government of the Republic. Mme. Loubet sat with the widow of the famous French scientist in a special tribune opposite the official stand. The Ambassadors of Germany, Austria-Hungary, and Russia assisted at the ceremony. Speeches were delivered by the President of the Municipal Council, the Prefect of the Seine, and the Minister of Public Instruction.

Horticultural Fête for New South Wales Queen Victoria Homes for Consumptives..—By direction of the executive committee the sum of £1300 has been handed to the hon. treasurer of Queen Victoria Homes for Consumptives, with a strong recommendation that arrangements be made for the admission of female patients as early as possible. There still remains a small balance, which will shortly be handed over. It is understood that provision has been made on the Estimates to the extent of £1000 to supplement the amount raised in connection with the horticultural fête.

Sydney District Nursing Association.—The garden fête held at the beginning of this month in aid of the District Nursing Association at State Government House, Cranbrook, proved a great success, the sum of £673 15s having been taken. The hon. secretaries and hon. treasurer anticipate that when all accounts have been paid in, the sum of £700 will be realised, which is most satisfactory, especially when it is known that the expenses will only be about £60 or £70.

Bacterial Origin of Gums.—At a meeting of the Sydney section of the Society of Chemical Industry held last month, an interesting paper on the bacterial origin of vegetable gums was read by Dr. Greig-Smith, bacteriologist to the Linnean Society. The paper was a continuation of one read recently to the society, in which the important announcement was made that gum arabic was secreted in wattle and other trees by a bacillus living on the sap, and was not a product of the tree itself. It was shown that the formation of other vegetable gums was due to a similar cause. It is now possible to inoculate healthy trees with a suitable culture of the gum-forming bacillus so as to induce the secretion of the most valuable variety of gum arabic.

Old Parramatta, N.S.W.—Under the guidance of Dr. Houison, president of the Australian Historical Society, a party of ladies and gentlemen visited Parramatta recently, when many historical sites were pointed out to them. The places of interest inspected were:—The old military barracks (now used as the Lancers' headquarters), the foundation-stone of which was laid in 1790; the old military hospital, now known as the Macquarie-street Asylum; experiment farm, the first Government grant, made to James Ruse in 1789. In 1793 it passed into the hands of Dr. John Harris, and is still in the possession of the Harris family. Elizabeth farmhouse, the home of John Macarthur, was next visited. This grant was taken possession of in 1793, and the old house is yet in a fairly good state of preservation. The old King's School in George-street was also viewed. This school was founded by the Rev. Robert Forrest on February 13th, 1832, and scholastic duties were carried on there till the new school was opened in 1836. A visit was afterwards paid to the present King's School, where the visitors were entertained.

PERSONAL ITEMS.

Sir Normand MacLaurin, M.D., M.L.C., who has been principal medical officer of the Mutual Life Association of Australasia for the last 30 years, has been appointed a director in room of the late Mr. Samuel Dickinson.

Dr. E. S. Hawthorne was entertained at a banquet and presented with an illuminated address at Mudgee, N.S.W., by the Ancient Order of Foresters, prior to his departure from the district.

Dr. J. J. Kelly, formerly in partnership with Dr. Blackwood at Summer Hill, has commenced practice at 20 Wynyard Square, Sydney.

Dr. W. T. Chenhall, of this city, who has been on a visit to England and America, has returned to Sydney and resumed practice.

Dr. G. A. Vivers, a recent graduate of the University of Sydney, has commenced practice at Darlinghurst-road, Sydney.

Dr. Milne, formerly of North Sydney, has succeeded to the practice of Dr. Tilley at Lismore.

Dr. F. Goldsmith has succeeded to the practice of Dr. MacSwinney at Chatswood, and has joined Dr. Crabbe in partnership.

The Hillgrove branch of the Manchester Unity Oddfellows has presented Dr. Hardcastle with a richly illuminated address in recognition of his 10 years' service.

A public meeting held recently at Molong, N.S.W., and presided over by the Mayor, unanimously decided to present Dr. Ross with a testimonial in recognition of his past 25 years' services as member for the old electorate of Molong.

Dr. W. E. Jones, who is at present superintendent of the Brecon and Radnor Joint County Asylum, Talgarth, Breconshire, has been selected by the Victorian State Cabinet for the post of Inspector-General of Lunacy.

Dr. Scot Skirving's return has been delayed. He hopes to arrive in Sydney about the middle of October.

Dr. R. Arthur, M.L.A., has been appointed president of the Manly to Spit Tramway League, Sydney.

Dr. B. B. Hoggan, the health officer of the borough of Newtown and Chilwell, Victoria, has resigned his appointment, as he intends leaving Australia at an early date.

Dr. T. Mailler Kendall, of Sydney, will shortly visit Hobart to report on the Metropolitan Drainage Board's septic tanks.

Dr. Samuel T. Knaggs left Sydney by s.s. "Taiyuan" *en route* to Hongkong, on September 9th.

Dr. A. Gervase Penny, M.A., M.B., B.C., D.P.H., Camb., has commenced practice at Clayfield, Brisbane, in partnership with Dr. Nall.

Dr. Eleanor Baker has accepted an offer of an appointment for six months as assistant medical officer of the Seacliff Asylum, Dunedin.

Dr. R. Church, of Dunedin, has been elected a representative to the Otago University Council.

Dr. R. V. Fulton, of Dunedin, has been awarded the New Zealand Volunteer Service Medal. He now takes rank as surgeon-major.

Dr. T. M. Hocken, after a prolonged tour in England, the Continent, and the Far East, recently returned to Dunedin after an absence of three years.

Dr. Moore, who was practising at Taneatua, Whakatane, has succeeded Dr. Pigeon on the cable steamer "Iris."

Dr. Crooke is acting *locum tenens* for Dr. Purchas, of Dargaville, Auckland, N.Z.

Dr. Pigeon, late of the Pacific Cable Company's steamer "Iris," has been appointed Stipendiary Magistrate and Government Medical Officer at the Chathams.

Dr. Barraclough, Assistant Medical Superintendent of the Porirua Asylum, who is about to take charge of the Auckland Asylum, was entertained recently at a banquet given by the Porirua residents.

Dr. Harrie Cox has been elected Mayor of Warren, N.S.W.

Dr. Crabbe, of Chatswood, after undergoing an operation in the Prince Alfred Hospital, Sydney, has returned home, but is unable at present to resume practice.

Dr. B. Poulton, of Adelaide, underwent the operation of appendicectomy early this month. He is making rapid progress towards recovery.

Dr. W. Anstey Giles intends to visit England at an early date.

Dr. Alex. Marks, of Brisbane, has gained the Diploma of Public Health of the Dublin University. He is spending a short time in America, but is expected to return to his home in Brisbane in about a month's time.

Dr. Harold G. Bennetts has sold his practice at Temora, N.S.W., to Dr. G. C. Harper. Dr. Bennetts will be leaving for England in March or April next, and until then will be available as *locum tenens*.

Brigade-Surgeon Lieutenant-Colonel W. R. Pearless and Surgeon-Major W. Bey, of the New Zealand Volunteer Medical Staff, have been awarded the Colonial Auxiliary Forces Officers' Decoration.

Dr. G. T. Hankins returned to Sydney by the steamer "Wilcannia" on September 12th, and has resumed practice at Elizabeth-street, Sydney.

MEDICAL APPOINTMENTS.

NEW SOUTH WALES.

Giommi, Mario, M.D. (Modena), to be Government Medical Officer and Vaccinator at Gilgandra.

Jewell, Charles Coleman, M.B., M.R.C.S., to be Junior Medical Officer on probation for 12 months in the Lunacy Department.

Stevenson, Frederick Charles, L.K.Q.C.P., L.R.C.S. (Irel.), to be Government Medical Officer and Vaccinator at Moss Vale.

VICTORIA.

Ingham, James Herbert Ivy, M.B., to be Acting Officer of Health, Shire of Lowan, during the absence on leave of Thomas Shanasy, L.R.C.P.

Naylor, Arthur George Eyre, L.R.C.P., to be Officer of Health Shire of South Gippsland.

Lyons, Martin Moylan, M.B., to be Officer of Health, Shire of Tungemah, *vice* Leslie Thompson Gillespie, M.B., resigned.

Moir, William, M.B., to be Officer of Health for the Shire of Mirboo.

Cadie, Dr., to be Deputy Medical Officer of the Ararat Asylum for Insane.

The following gentlemen to be Public Vaccinators for the districts respectively mentioned, viz.:—

Adams, John, North and North-Western, *vice* D. H. Young, M.B., resigned.

Barnard, C. E., M.D., Metropolitan, acting, during the absence of J. Caldwell Thomas, M.D., on leave.

Pestell, James Hutcheson, L.R.C.P., Metropolitan, acting, during the absence of Ernest K. Overend, M.B., on leave.

Jamieson, Stanley C., M.B., Northern, *vice* Edward F. O'Sullivan, M.D., resigned.

Lethbridge, Charles Frederick, M.R.C.S., North-Western, *vice* Charles Edward Barnard, M.R.C.S., resigned.

Naylor, Arthur George Eyre, L.R.C.P., South-Eastern, *vice* Thomas O. F. Alsop, M.B., resigned.

McLean, Thomas Alexander, M.B., South-Eastern.

Ingham, J. H. I., M.B., North-Western, acting, during the absence of Thomas Shanasy, L.R.C.P.

Johnston, J. C., M.B., South-Eastern, *vice* Edward Bruce Robertson, M.B., resigned.

Robinson, Douglas Albert, L.R.C.P., Borough of Browns and Scarsdale and Borough of Smythesdale (joint appointment), *vice* Horace Pern, L.R.C.P., resigned.

Adams, John, L.R.C.P., Shire of Korong, South Riding.

SOUTH AUSTRALIA.

Magarey, Frank William Astley, M.D. (Syd.), to be Honorary Assistant Surgeon at the Adelaide Hospital, *vice* Cudmore, promoted to full surgeoncy.

Marsden, Dr., of Port Broughton, to be a Public Vaccinator.

WEST AUSTRALIA.

House, F. W., M.R.C.S., L.R.C.P., to be Medical Officer for Katanning.

Moss, Matthew Kasner, M.B., B.S. (Melb.), to be Junior Resident Medical Officer, Perth Public Hospital.

QUEENSLAND.

Woolraabe, Dr. F., to be Health Officer for the port of Brisbane, *vice* Dr. O'Brien, resigned. Also Health Officer under the Health Department.

TASMANIA.

Parker, Charles, M.B., Ch.M. (Edin.), to be ex-officio member of the Board of Management of the Launceston General Hospital, *vice* Dr. G. E. Clemons, resigned.

Rodway, F. A., to be Resident Surgeon of the Launceston Hospital.

NEW ZEALAND.

Pigeon, Hugh Walter, M.D., M.S. (McGill Univ.), to be Public Vaccinator, Chatham Islands.

Simmons, Wilfred Thomas, M.B., Ch.B. (Univ. N.Z., 1902), to be Public Vaccinator, Patea.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

NEW SOUTH WALES.

Conolly, Noel Alfred William, M.R.C.S. (Eng.); L.R.C.P. (Lond.), 1902.

Weir, Albert Antliff, M.B. (Melb.), 1902.

LeFevre, John Speechly, M.R.C.S. (Eng.); L.R.C.P. (Lond.), 1904.

SOUTH AUSTRALIA.

Cumpston, John Howard Lidgett, M.B., 1902; B.S. (Melb.), 1903.

Deravin, Walter Eugene, M.B., B.S. (Melb.), 1903.

Additional Registration.

D'Arcy, Constance Elizabeth, Ch.M. (Syd.), 1904.

BIRTHS, MARRIAGE AND DEATHS.

BIRTHS.

BUSBY.—August 6th, 1904, at Gulgong, N.S.W., the wife of Hugh Busby, M.B., Ch.M., Sydney, of a daughter.

FRIZELL.—August 2nd, at "Tyrone," Strathfield, Sydney, the wife of T. Frizell, M.D., of a son.

LANCASTER.—August 3rd, at Kempsey, Macleay River, N.S.W., the wife of L. B. Lancaster, M.B., Ch.M., of a son.

MACCARTHY.—July 16th, 1904, at Peak Hill, N.S.W., the wife of Dr. C. D. MacCarthy, of a son.

MARRIAGE.

HEARNE—GRUBB.—On August 4th, 1904, at St. Peter's Church, Melbourne, by the Rev. F. Anderson, Dr. W. W. Hearne, of South Melbourne, to Alice May, eldest daughter of F. W. Grubb, of Hatherley, Launceston.

DEATHS.

KENNEDY.—On August 23rd, at his residence, Glebe Point, Sydney, John Kennedy, M.D., Ch.M., L.M., Q.U.I.

LANCASTER.—August 16th at Kempsey, Macleay River, N.S.W., Lilian, wife of L. B. Lancaster, M.B., Ch.M.

PURCELL.—August 29th, at his residence, 13 Jamieson-street, Sydney, Herbert Churchill Purcell, M.D., aged 58.

MONEY.—On September 2nd, at his residence, "Strathallen," Randwick, Sydney, Angel Money, M.D., F.R.C.P. (Lond.), aged 48.

BOOKS RECEIVED.

North Queensland Ethnography. By W. E. Roth, M.R.C.S. August, 1904.

Adenoids. By Wyatt Wingrave, M.D. London: Baillière, Tindall & Cox. Sydney: L. Bruck. Crown 8vo. Price, 2s 6d net.

Glasgow University Calendar. 1904-5.

Manual of Practical Medical Electricity, the Röntgen Rays, Finsen Light, Radium and its Radiations, and High Frequency Currents. By Dawson Turner, M.D., F.R.C.S. (Edin.). Fourth edition, revised and enlarged. London: Baillière, Tindall & Cox. Sydney: L. Bruck. Price, 10s 6d net.

Diseases of the Stomach and their Surgical Treatment. By A. W. Mayo Robson, F.R.C.S., and B. G. A. Moynihan, M.S. (Lond.), F.R.C.S. Second edition. London: Baillière, Tindall & Cox. Sydney: L. Bruck. 1904. Price, 15s net.

American Pocket Medical Dictionary. Edited by W. A. N. Dorland, M.D. Philadelphia: W. B. Saunders & Co. Melbourne: Jas. Little. 1903. Price, 6s 6d.

Obstetric and Gynæcologic Nursing. By Edward P. Davis, M.D. Second edition. Philadelphia: W. B. Saunders and Co. Melbourne: Jas. Little. 1904.

Diseases of the Intestines and Peritoneum. By Prof. Dr. H. Northnagel. Edited with additions by H. D. Rolleston, M.D., F.R.C.P. Authorised translation under the supervision of Alfred Stengel, M.D. Philadelphia: W. B. Saunders & Co. Melbourne: Jas. Little. 1904. Price, 35s.

Tuberculosis and Acute General Miliary Tuberculosis. By Prof. Dr. G. Cornet. Edited with additions by W. B. James, M.D. Authorised translation by Alfred Stengel, M.D. Philadelphia: W. B. Saunders & Co. Melbourne: Jas. Little. 1904. Price, 25s.

A Text-Book on the Practice of Medicine. Designed for the use of Students. By Jas. Magoffin French, M.D., Lecturer on the Theory and Practice of Medicine, Medical College of Ohio. New York: Wm. Wood & Co. 1903. Sydney: L. Bruck. Price, 16s.

A Text-Book of Surgery for Students and Practitioners. By Geo. Emerson Brewer, M.D., Lecturer on Clinical Surgery, The College of Physicians and Surgeons, Columbia University, New York. New York: Lea Brothers & Co. Sydney: L. Bruck. 1903. Price, 16s.

The Case Against Anti-Vivisection. By Stephen Paget. London: The Scientific Press. Price, 2s net.

What We Owe to Experiments on Animals. By Stephen Paget. London: The Scientific Press. Price, 1s 6d net.

Physical Deterioration: Its Causes and the Remedy. By A. Watt Smith. London: John Murray. Sydney: Angus and Robinson. 1904. Price, 7s net.

LETTERS AND OTHER COMMUNICATIONS RECEIVED FROM CORRESPONDENTS:—

Dr. Rees F. Llewellyn, Braidwood; Dr. T. G. Beckett, Melbourne; Dr. B. B. Ham, Brisbane; Mr. G. T. Taylor, Hobart; Dr. E. Ken Herring, Shepparton (Vic.); Dr. G. A. Syme, Melbourne; Mr. G. Arnold, Sydney; Dr. E. C. L. Miller, Detroit, Mich.; Dr. Richard Arthur, Sydney; Dr. H. C. Hinder, Sydney; Hon. J. B. Nash, Sydney; Messrs. Zoeller & Ross, Sydney; Dr. A. W. McMurray, Sydney; Dr. H. Russell Nolan, Sydney; Dr. J. Ashburton Thompson, Sydney; Dr. L. Kesteven, [illegible]; Dr. F. S. Zlotowski, Mungundi; Dr. Cox, Wallsend; Dr. A. B. Brockway, Brisbane; Dr. J. Adam-Dick, Sydney; Dr. Gunson, Adelaide; Dr. Jas. Booth, Broken Hill; Dr. Metcalfe, Norfolk Island; Mrs. Machattie, Bathurst; Dr. John Knott, Dublin; Dr. T. L. Anderson, Fremantle, W.A.; Dr. T. Malcolm Mason, Wellington, N.Z.

AUSTRALASIAN MEDICAL GAZETTE.

MALIGNANT PUSTULE.

By A. MacCormick, M.D. (Edin.), M. and Hon. F.R.C.S. (Eng.), and
Frank Tidswell, M.B., Ch.M. (Syd.), D.P.H. (Camb.), Fellow of the Sanitary Institute of Great Britain, Sydney.

In our own experience, and, as far as we can learn, in the experience of our *confrères*, malignant pustule has not often come under notice here either in hospital or private work. Reference to the files of the *Australasian Medical Gazette* issued during the last 14 years has revealed records of one case of malignant pustule published by Dr. A. F. Hepburn, of Yarrawonga, Victoria,[1] and of one case of anthrax œdema published by Dr. J. W. Springthorpe, of Melbourne.[2] The last-named gentleman refers to four other instances of anthrax infection of which he had been informed. Of course, other cases of anthrax have occurred. The official statistics show that during the past ten years there have been in this State 33 deaths classified as due to anthrax. We have not been able to obtain any satisfactory data as to the prevalence of this disease amongst the lower animals. The Chief Inspector of Stock informs us no accurate record of outbreaks has been kept. However, it is a matter of common knowledge that it has from time to time prevailed more or less extensively in various parts of the State. Hence, although the disease is not met with in human beings as often as might perhaps be expected in view of the large part played by animal industry in our country's business, yet it appears desirable to have an eye to it as a someday possibility of our practice. This consideration, and the fact that we have been fortunate enough to obtain a pretty complete series of typical specimens to exhibit to you, have been our inducement to bring the present case under your notice.

J. E. W., aged about 60, a grazier, gives the following history of his own case:—On Wednesday, April 6th, and for several days previously, he was engaged shearing ewes that had become fly-blown after lambing, and which were very filthy. In plucking the wool and cleaning away the maggots his hands got very dirty. On that day he noticed a small pimple in the centre of his forehead, and he thought he might have touched the part with dirty hands. He noticed also that there were a large number of blue green flies around the ewes during the time, and one of them may have alighted on his forehead, but he did not notice it. On Thursday morning the pimple was a pink inflamed spot about the size of a shilling, with no matter in it and practically without pain; he had no covering on it and the flies worried it.

On Friday, April 8th, the sore place was still large and developed a dark spot in the centre. There was still practically no pain. On Saturday he looked at it in the glass and noticed a great increase in the size of the sore, and much more swelling, and the glands in front of the ear were sore and swollen. He then began to get anxious and applied poultices, which he thought softened it. On Sunday he consulted Dr. Broad, of Narrandera, who explained to him the seriousness of his condition, and as he was rapidly becoming worse he decided to come to Sydney, where he arrived on Tuesday morning, April 12th.

On examining him on Tuesday morning we found him with a temperature of 103° F., pulse 120 p.m., complaining of great weakness and a continuous heavy burning sensation at the back of the head and neck. On his forehead there was situated a lesion presenting the characters of malignant pustule, as described hereunder, and the face generally was so swollen that he could scarcely open his eyes. The œdema extended to the mucous membrane of the mouth and fauces (the patient was troubled by a "sticky" phlegm, which he had to continuously wipe from his mouth), and also under the chin to the neck and front of the chest. Microscopical examination of fluid from one of the vesicles of the pustule having revealed the presence of what we regarded as anthrax bacilli (*vide infra*), it was decided to immediately extirpate the pustule. With the assistance of Dr. W. H. Crago the area of skin and subcutaneous tissue occupied by and surrounding the pustule was cut away, and the raw surface left was smeared over with pure carbolic acid. Next day the patient's temperature was normal and pulse 86 p.m. The œdematous swelling began to subside at once and steadily progressed. The convalescence was uneventful. Healing of the raw surface left by the operation was promoted by transplantation of prepuce.

The bacteriological observations made in connection with this case were as follow. Preliminary examinations of fluid from the vesicles revealed the presence of a few bacilli possessing the morphological characters of bacillus anthracis, showing particularly the square-cut ends, and granular protoplasm, with indication of a capsule, and retaining the stain after treatment by Gram's method. These characters are, of course, not distinctive of anthrax. A lesion due to other causes might possibly have been contaminated with soil or water, and the bacilli be the common bacillus mycoides or bacillus anthracoides, *i.e.*, saprophytic species. Pansini's anthrax-like bacilli of sputum (No. 3, bacillus granulatus, and No. 4, bacillus sputi) could reasonably be excluded, but another similar organism, the bacillus sessilis of Klein, which was isolated from a cow supposed to be suffering from anthrax, was a possibility in view of the patient being a grazier. However, the fact that bacilli possessing such characters as those mentioned were obtained from a typical looking malignant pustule, which had appeared shortly after handling animals so prone to anthrax as sheep, furnished in our judgment sufficient justification for the operative procedure adopted.

After the pustule had been extipated, it remained to be proved that it was truly a malignant pustule and due to anthrax infection. This was done by the further examination of smear preparations made with scrapings from a cut surface of the pustule and of cultures of nutrient media inoculated with such scrapings, and by the inoculation into guinea-pig of growths of bacilli isolated by such cultivation. In all particulars the diagnosis of anthrax was confirmed; the principal items of evidence are now submitted for your examination.

In the microscopical examination of bacilli from an agar culture, stained by Gram's method, you will easily recognise the characters of B. anthracis; in addition to those already mentioned there are to be seen the filaments of bacilli end to end, and the spores, generally mesially situated, and not causing alteration of the regular outline of the micro-organism.

The easily-supplied nutritive requirements of the bacillus are manifested by its abundant growth in all the ordinary culture media. We need not trespass upon your indulgence by giving a detailed description of the biological characters, but, in view of some remarks to follow, would invite your attention to the ability of the bacillus to liquefy gelatine and peptonise milk—the latter being first curdled or coagulated and afterwards digested. In addition to the bacillus a colony of staphylococcus pyogenes aureus appeared in the cultivation. This association is not unusual, and the staphylococcus has been held responsible for the œdema round the pustule, or at least for the excessive changes in this direction. So far as we are aware this idea lacks foundation; there is no doubt that pure anthrax bacilli can and do by themselves produce very extensive œdema. In the present instance the staphylococcus was not in number, was not, in fact, discernible in stained sections of the pustule. We see no reason, therefore, to attribute the œdema to its influence.

The infection of the guinea-pig was followed by the usual pathogenic consequences. The animal was inoculated subcutaneously in the right thigh with a portion of a pure subculture of the bacillus. The inoculation was done about four o'clock in the afternoon. At nine next morning the animal was quiet and sick, crouched in its cage with fur erect and eyes closed, and not eating its food. At the site of inoculation there was a tender swelling, which extended into the adjacent groin. On the following morning the guinea-pig was found dead, having succumbed within 41 hours after infection. The post-mortem appearances were those usual in anthrax: hæmohrragic œdema of site of inoculation and surrounding tissues, dark, tarry condition of the blood, intense congestion of the organs, numerous hæmorrhages and enlargement of the spleen. On microscopical examination, the blood and tissues were found to be teeming with anthrax bacilli. We submit for your examination sections of the spleen and kidney showing the enormous numbers of bacilli in the pulp and capillary vessels respectively. The recovery of the bacilli from the blood and various organs—lymphatic glands, spleen, and liver—completed the chain of proof required by Koch's postulates.

In addition to the bacteriological specimens we submit the excised pustule and also a section of it. The pustule shows the typical central black spot upon an area of necrosis, which is bordered by a ring of vesicles, the whole being swollen, œdematous, and more or less hæmorrhagic. Examination of the sections will show changes practically limited to the epidermis and superficial corium. At one edge will be seen the normal skin. Here the epidermis, hair follicles, and glands are regular, and the corium contains only a moderate number of cells ; the blood-vessels are inconspicuous. Proceeding inwards from this there will be met with a gradually increasing accumulation of cellular elements—a leucocytosis—associated with congestion of the blood-vessels, small hæmorrhages, and exudation of fluid. In the epidermis this fluid has split the stratum Malpighii, leaving the basal cells for the most part attached to the corium, and raising the remaining strata of the epidermis to form one of the vesicles of the ring. In this vesicle are accumulated fluid, blood, leucocytes, and *débris*. Further inwards the cellular and vascular changes become more pronounced, and there appear also degenerative alterations. The tissues lose their definite structure, become indistinct and fused together, and then, mixed with extravasated blood, pass into a general destruction which indicates the area of central necrosis. In following the changes in the manner just described the bacilli were met with first at the inner margin of the vesicle. Onwards from this they are remarkably limited to the epidermis, showing, however, a tendency to pass downwards along hair follicles and gland ducts, and occasionally penetrating into the corium. In the necrosed area they penetrate more deeply into the destroyed tissue of the corium. In the present specimen, therefore, the vesicular ring appears to mark the limit of horizontal extension of the bacilli from the exact point of inoculation, and the line of excision is satisfactorily clear of their limit of penetration inwards. It may here be remarked that microscopical and cultural examination of blood from the patient's ear were negative —the bacilli had not yet reached the general circulation.

From the foregoing account of our case we have selected two points to which we invite your attention as being of sufficient interest to merit discussion. These are, first, the mode of infection, and secondly, the prompt subsidence of the general symptoms after extirpation of the pustule.

As regards anthrax generally, the persons liable to infection are usually held to be those who have to do with living animals, especially sheep (*e.g.*, shepherds, shearers, drovers, graziers, farm labourers, veterinary surgeons, etc.), or with raw animal products, such as carcases, hides and wool (*e.g.*, butchers, knackers, employees in wool and hide stores, wool-sorters, tanners, fellmongers, etc.). By the courtesy of Mr. J. B. Trivett, of the Government Statistician's office, Sydney, we have been placed in possession of the essential facts with respect to the thirty-three persons already mentioned whose deaths have been classified as resulting from anthrax. We rejected four of the records because anthrax was not specifically certified in them. Of the remaining 29 we find 26 were males and three were females. Concerning the latter we have no data as to their employment, nor any other suggestion as to the way in which they acquired the disease, save only that one of them is said to have been stung by an insect. Of the 26 males, 17 followed occupations which brought them into more or less close contact with animals, viz., graziers, 4; farm labourers, 7 ; butchers, 2 ; shepherd, 1 ; drover, 1; produce dealer, 1; and carrier, 1. The occupations of the remaining nine do not afford a guide as to the mode of their infection ; the list comprises an auctioneer (who may have been a cattle salesman ?), an engineer, a miner, a newsagent, two seamen, and three other persons whose employment is not defined. The death-place of 23 of the 29 persons was in the country, that of three others in the metropolitan district, whilst that of the remaining three was not ascertained by Mr. Trivett, owing to the necessary papers not being available to him for the time being. Of the three persons who died in the metropolitan area, two were styled respectively master mariner and newsagent; the occupation of the third is not stated. The noteworthy point in this connection is the lack of evidence of the infection of anyone of the numerous persons who handle wool and hides in this city. We are assured by well-known gentlemen who have been long connected with this kind of business that no instance of such infection has come under their notice. We presume, therefore, if it occur at all it must be very rare. The principal incidence of anthrax in this country, as far as we can ascertain, has been upon persons associated with infected living or recently dead animals. By implication the bacilli must be conveyed more or less immediately from the animal or its carcase to man. In our patient's case there is clear association with sheep, and in view of the proneness of these animals to anthrax suspicion naturally falls upon them as the source of his infection—the bacilli, one may suppose, being conveyed and inoculated into his forehead by his own contaminated finger nails. But with respect to this point the patient was positive that the sheep in question were not affected with anthrax, and he was by occupation well enough acquainted with the characters of that disease in sheep to have recognised it had it been existent in the animals. At the same time he admitted that several horses on his run had died of anthrax, and he gave expression to the current idea that a fly might have conveyed the bacilli from them to him. He mentions the presence of numerous flies about him at the time, but was not conscious of their having settled or bitten him upon his forehead; he did not, for instance, feel a sting such as is so commonly mentioned in connection with these cases. The mortality data already referred to mention here and there the sting of an insect or bite of a fly preliminary to infection, but it is questionable if this means the insect or fly was actually observed to bite. It has been several times pointed out that the generally sharp pain and the appearance of the part at an early stage may give the misleading impression of an insect bite. We find that our figures, tabulated to display the mensual distribution of the deaths (January 4, February 1, April 6, May 3, June 3, September 2, October 1, November 1, and December 5), do not in so far as they go specially implicate the warm weather fly; the deaths (14) during the warmer months (September to March) are but little more numerous than those (12) recorded during the colder months (April to August). Nuttall, after reviewing a considerable amount of evidence on the point,[3] is inclined to discredit the view that anthrax is conveyed by biting flies. He adds, however, a pregnant sentence, which reads as follows:—"That ordinary flies (*Musca domestica*, and the like) may carry about and deposit the bacillus of anthrax in their excrements, or cause infection through their soiled exterior coming in contact with wounded surfaces or food, may be accepted as proven in view of the experimental evidence already presented" (*loc. cit.*, p. 12). The suggestion is that a pre-existing lesion may be secondarily infected with anthrax bacilli carried to it by flies. If our patient's history be remembered it will be apparent that there are certain elements in it which make this explanation of his infection a feasible one. The painless early stage, the "worrying" of the inflamed spot by flies, and the subsequent rapid development of acute, more anthrax-like symptoms are perfectly consistent with the notion of secondary infection by the fly-borne anthrax bacilli (derived from the horses ?) of a lesion primarily caused by inoculation of ordinary septic (staphylococcic ?) material got from the maggoty sores on the sheep. We conceive it to be most likely that our patient became infected in this or in some closely similar way.

The second point we have to submit for your consideration is the prompt relief of the constitutional symptoms which followed the operation. In passing, we may note the same satisfactory issue attended the similar procedure adopted by Dr. Hepburn in dealing with his case. It will be remembered that in examining sections of the pustule we noted the bacilli were restricted to the epidermis and superficial corium; were apparently completely removed with the tissue excised. This initial limitation of the bacilli to the site of inoculation and its vicinity has been reported by other investigators.[4] By subsequent invasion of the blood the bacilli produce fatal septicæmia. But even whilst they are still restricted to the immediate neighbourhood of the point of inoculation, the patient, as in the present instance, experiences more or less severe constitutional effects. Pyrexia, prostration, general pains, diarrhœa, and sweating are recorded in this relationship. In explanation of these effects, one nowadays immediately thinks of toxines, analogous to those which are present in diphtheria and tetanus. For this idea there is a certain amount of warranty, since various investigators have reported the detection of toxic substances in anthrax cultures and tissues.[5] Marmier, indeed, professes to have isolated a specific toxine from anthrax bacilli grown in an artificial medium, containing peptone and glycerine as its only organic constituents. The conclusion as to specificity is apparently based upon the observations that the toxine affects only animals susceptible to anthrax, and that treatment of animals with carefully graduated doses of the separated product results in their becoming immune to anthrax bacilli. Although this particular product is obtained by precipitation with ammonium sulphate, which would suggest its being of a proteid character, Marmier states it is not a proteid, nor, on the other hand, is it an alkaloid. It is said not to give any of the reactions of proteids, but the tests applied are not mentioned. Observations upon the lethal dose showed that whilst some rabbits were easily killed by 20 milligrammes, others resisted as much as 70 milligrammes—results which indicate that the substance obtained was impure and much of it inert, the variations being probably due to unequal distribution of the actual toxic substance. These observations have not been confirmed, and are generally regarded as unconvincing in so far as concerns the existence of a specific toxine. But toxic bodies of a less directly specific nature have been isolated by several observers from either cultures of the bacilli or the tissues of animals dead of anthrax. Thus Hankin, Sidney Martin, Balp and Cartoni, Landi, Brieger and Fraenkel, Petermann, Klemperer, and Hankin and Wesbrook all report the isolation of an albumose or albumoses. They are pretty well agreed, however, that such albumose is either not at all or only slightly poisonous. It causes, for the most part, only a little rise of temperature, and is regarded as inadequate to account for the oftentimes severe constitutional disturbance from which the patients suffer. Hoffa and Sidney Martin report the isolation of alkaloids or ptomaines. Hoffa named his ptomaines "anthracin," and says its subcutaneous injection produced the symptoms of anthrax and death. Sidney Martin's alkaloid is said to differ from Hoffa's. It is said also to be more toxic than the albumoses which Martin found associated with it (the alkaloids being fatal to mice in doses of ·1 to ·15 gram., whereas the corresponding dose of albumoses is ·3 gramme). The injection of this alkaloid is followed by œdema, extravasations of blood into the peritoneal cavity, thrombosis of small veins, and enlargement of the spleen. Heim and Geyger have also isolated toxic substances from egg cultures, which are apparently alkaloidal in nature. Anthrax cultures have also yielded other substances, such as leucin and tyrosin (Martin), volatile fatty acids, formic, acetic, and caproic ((Ivanou), etc., but there is no evidence that any of these substances has to do with the production of the particular effects of the disease.

This review of these various accounts shows that, apart from Marmier's unconfirmed statements as to a specific toxine, there is report of the occurrence of albumose, which, however, does not appear to be poisonous enough to account for the symptoms, and alkaloid which may perhaps be regarded as the more likely effective agency. In so far, then, there are grounds in favour of attributing the constitutional effects to some toxic substance. We might, for practical purposes, waive the question of its precise character, and be content with the general idea of a toxine, if only matters could be allowed to rest at this point. But there here enters a disturbing element; it is denied that the bacilli produce any such toxine. As long ago as 1877, Pasteur injected germ free porcelain filtrates of anthrax blood and cultures into animals without inducing disease, and concluded the bacillus does not produce any soluble poison. Maltzew obtained similar negative results with filtered cultures, injecting from ·2 to 7·0 c.c. into rabbits without ill effect; but he found animals so treated were rendered unnaturally susceptible to subsequently inoculated anthrax, *i.e.*, died more quickly than untreated controls. Marmier considered his specific toxine existed not in the fluid of the culture but within the bodies of the bacilli; but Klein, having injected suspensions of killed anthrax bacilli without ill effect, concluded that no intra-bacillary poison existed. Finally mention may be made of the results obtained by Conradi, who concludes that anthrax bacilli produce neither extra- nor intra-bacillary poisons. His principal points of evidence are as follow:—

As regards soluble or extra-bacillary poisons:—

1. Filtered peritoneal exudates of anthraxed guinea-pigs were without effect on rabbits even in doses of 10 or 20 c.c.
2. Filtrates of saline extracts of crushed spleens and livers of anthraxed guinea-pigs were without effect on injection into white rats, guinea-pigs and rabbits.
3. Collodion sacs filled with virulent anthrax bacilli were placed in the abdominal cavities of susceptible animals without ill effects.
4. The method of Brieger and Fraenkel was followed, but no toxic substance obtained.

As regards intra-bacilliary toxines:—

5. Bacilli in anthrax exudates were killed by mixture with toluol, allowed to macerate for a time, the toluol removed and the remaining fluid injected without ill effect.

6. Cultures were subjected to a pressure of 500 atmospheres, the expressed fluid filtered through porcelain and injected without ill effect.
7. Asporogenous cultures were killed by exposure to a temperature of −16° for 110 hours—cultures therefrom being negative, and their injections without ill effect.

It need scarcely be pointed out that these observations of Conradi are very searching and appear to afford ample justification for the author's conclusion that the anthrax bacillus forms neither intra-bacillary nor extra-bacillary poisonous substances. But if this conclusion be valid how then are the constitutional symptoms of malignant pustule to be explained? Such alternative suggestions as (1) deoxidation of the blood by the bacilli; (2) mechanical impediment to the circulation owing to blockage of the capillaries by masses of bacilli (see sections of guinea-pig organs exhibited); and (3) consumption of the proteids of the body and deprivation of sustenance, obviously cannot apply in the case where the bacilli are strictly limited in distribution to a small area of the skin. The only other explanation suggested is destruction of the blood. It is probable that blood corpuscles and also vascular endothelium are injured in anthrax, since there are hæmorrhagic effects. Moreover, Bianchi Mariotti has found that filtered anthrax cultures injected intravenously change the isotonia of the blood and diminish the hæmoglobin in direct proportion to the amount of filtrate injected. But these blood effects would depend on the circulation of a toxic substance, which, Conradi says, the bacilli do not produce. The position in which Conradi's work has placed this matter deprives us, in fact, of any ready explanation as to the way in which the patient's general health is affected. Whilst we may be very disinclined to abandon the idea of intoxication so strongly suggested by the clinical manifestations, we obviously cannot accept offhand the idea of the simple elaboration of an easily diffusible toxine analogous to those believed to exist in the case of diphtheria and tetanus. There seems to be a slight prospect of this problem being solved on the basis of what can be seen going on in the gelatine and milk culture exhibited to you to-night. The gelatine is liquefied, the milk peptonised—activities which in both instances display the existence of ferments. The bacillus of anthrax is known to produce peptonising (Fermi), diastatic (Maumus), and curdling (Roger) ferments. May it not be that although the bacilli do not produce a poison primarily, the intoxicating substance which appears to be present is formed as a secondary product of the operation of these ferments, or some of them, upon the tissues of the body? We are conscious that some of Conradi's results may offer apparent impediments to this view. But they do not, we think, so completely cover the field as to entirely exclude an explanation having this basis. Sidney Martin believes his albumoses to be the forerunners of his ptomaine; the process indicated being such as occurs in putrefaction, or for a matter of that, in natural digestion. If the ferments of the anthrax bacilli can digest the tissues, the products of such digestion may conceivably be the agents responsible for the constitutional effects observed in malignant pustule. We cannot press this point in the absence of further information; we can do no more than suggest it as a hopeful direction in which to seek for light beyond the clouds of uncertainty which at present obscure precise views of the subject.

REFERENCES.—(1) *A. M. Gazette*, 1898, p. 533. (2) Ibid, 1895, p. 190. (3) On the Rôle of Insects, etc., as Carriers of Bacterial and Parasitic Diseases. Johns Hopkins Hospital Reports, vol. viii., p. 2. (4) Ref. in System of Medicine, Fagge and Pye Smith, ed. 4, vol. i. (5) For evidence and discussion of this point, see Vaughan and Novy, Cellular Toxins, p. 48 *et seq.*

(Read before the New South Wales Branch of the British Medical Association.)

ANGIO-NEUROTIC ŒDEMA.

By C. Reissmann, M.A., M.D., B.C. (Camb.), B.Sc., M.R.C.P. (Lond.), Adelaide.

THE subject of this paper is an intellectual but nervous girl aged 20. Her family history is as follows:—Both grandfathers died from chest affections; both grandmothers are living and well, aged 70 and 90 respectively. The father has valvular disease of the heart. The mother is an active, nervous woman, apt to be hysterical, and she was recently under my care for hysterical aphonia. With this exception the other members of the family have not shown any nervous weakness.

History.—The story is that 16 years ago, when the patient was a little child four years of age, she was having her usual evening bath when her mother noticed one of her feet suddenly to become swollen and discoloured. The swelling subsided in a few days. Since that early date the patient has been the victim of ever-recurring but transient swellings. They appear at irregular intervals, usually several times a month, but especially at or just before a menstrual period. No one thing seems to influence the incidence of these attacks. They have no relation to articles of diet, to taste or smell, neither does change of locality induce them. Mental excitement is the only determining factor that I have been able to discover. Thus the suggested administration of an anæsthetic has caused an attack. But attacks occur equally frequently without any apparent mental influence.

Position.—The parts affected have been the face, one or both eyelids, the cheek, the inside of the mouth, one or both hands and fingers, the front or back of the arm, the feet or legs. The swellings may appear in more than one part at the same time, *e.g.*, the left side of the face and on the right hand. They do not follow any definite area of nerve distribution.

Nature of the Swelling.—The swollen part has a marble-like surface, and it has often a very definite outline. A swelling of the cheek may end abruptly in the middle of the lip. It is neither tender nor painful, but the skin over it burns or itches. Sometimes it becomes dark, almost black, then fading like an ordinary bruise. It may be very disfiguring, and an eyelid may be so swollen that the patient is scarcely able to see.

Character of the Attack.—The patient may be feeling perfectly well when she will experience a pain in the abdomen, a little below and to the left of the umbilicus, and the part becomes tender. This pain warns her of an impending attack. Some hours later, most frequently during the night, the swelling appears, and increasing in size it reaches its maximum in about half-an-hour. She then feels indescribably ill, and if the attack occur in the daytime she has perforce to take to her bed. A few hours later she has a feeling of discomfort at the pit of the stomach, and then vomits. After this she is much relieved, the attack passes off, and the swelling disappears in a few days.

In these attacks, which are always the same, we may distinguish four stages: firstly, the umbilical pain; secondly, the appearance of swellings; thirdly, the gastric crisis; and lastly, recovery.

Definition.—Angio-neurotic œdema is thus described in a recent text-book of diseases of the nervous system.(1)

"It is marked by acute circumscribed swellings of the subcutaneous or submucous tissues, often presents a direct heredity, usually appears in those of neuropathic diathesis, is often periodic or recurrent, and is commonly attended by gastro-intestinal colics." Now this collection of symptoms almost exactly describes the present case. There are the swellings; they cannot, it is true, be traced in other members of the family, but there is the neuropathic diathesis; the mother having had hysterical aphonia, and the patient herself being distinctly nervous. The attacks are recurrent, and they are attended by gastro-intestinal colics.

Pathology.—Angio-neurotic œdema is probably one of the numerous varieties of urticaria. Professor A. E. Wright has taught us(2) that urticaria is a serous hæmorrhage. This serous hæmorrhage is often associated with, and is probably dependent on, a condition of defective coagulability of the blood.

He reminds us how frequently urticaria follows any of the following acts:—(*a*) The injection of diphtheria antitoxin; (*b*) eating unripe fruit; (*c*) eating shell fish; (*d*) eating rhubarb; (*e*) the use of an enema of soap and water.

Now as to (*a*): the injection of antidiptheritic serum has been proved to lessen the coagulability of the blood. (*b*) Unripe fruit contains free vegetable acid such as citric acid, etc. These acids readily unite with calcium forming insoluble salts, and thus by decalcifying the blood lessen its coagulability. (*c*) The consumption of shell fish has been proved in some cases to lessen the coagulability of the blood. (*d*) Rhubarb is rich in oxalates, which, owing to their affinity for calcium, act as decalcifying agents and so lessen the coagulability of the blood. (*e*) A soap enema acts in a similar manner, owing to the fatty acids of the soap. From these facts Professor Wright made the very fair deduction that urticaria or serous hæmorrhage is a result of lessened coagulability of the blood.

Treatment.—One should therefore aim at increasing the coagulability of the blood by avoiding the consumption of vegetable acids and alcohol by limiting the consumption of liquid, and by giving diaphoretics and saline purges. But more important than these is the exhibition of calcium chloride, which, if given in proper quantity, materially increases the coagulability of the blood. It is given in doses of 15 to 18 grains with tincture of bitter orange and chloroform water thrice daily. Applying Professor Wright's teaching to the present case, I first satisfied myself that there was no obvious external cause which produced the attack. I then attempted to take the coagulation time of the patient's blood by means of capillary tubes, but (and I am ashamed to confess it) I was unable to determine this accurately. I then ordered calcium chloride in doses of 20 grains thrice daily. The result so far has not only been satisfactory, but extraordinary. Before the drug was given the patient had two or more attacks a week. She was unable to attend any social function, and was becoming a chronic invalid.

Since she has taken calcium chloride she has become altogether more bright and active, is able to get up early in the morning, spend a busy day, and perhaps sing at a social meeting in the evening. Further than that she has not had a single attack of œdema. But she has only been under treatment with calcium for a month. I sincerely hope her improvement may be permanent.

[P.S.—It is now 2½ months since the patient was treated with calcium chloride. She has had no swelling during this time, which is the longest interval since the commencement of her illness, 16 years ago.]

I am aware that this treatment has not always proved successful. In spite of all treatment, patients have at times continued to suffer from the disease to the end of their days.

It has even happened that a young life has been prematurely brought to a sudden close by an urticarial swelling in the larynx completely blocking the entry of air.

(1) Nervous and mental diseases, Church-Peterson, 1902.
(2) *Lancet*, 1894.

CASE OF DECIDUOMA MALIGNUM.

By Ralph Worrall, M.D., M.Ch., Q.U.I.; Surgeon to the Department of Women at the Sydney Hospital.

DECIDUOMA MALIGNUM is a rare disease. No case of the kind in which the clinical picture was complete has, so far as I know, been recorded in the work of any Australian surgeon. The still unsolved problems connected with this subject can only be made clear by accurate clinical histories of those cases which every now and again come under our notice, and I have therefore thought I might be justified in occupying a few minutes of the valuable time of the branch with the narration of the following case:—

Mrs. G. was sent to me by Dr. Forster, of Narramine, late Resident Medical Officer to the Sydney Hospital, on April 29th, 1904, with this history:—*Æt.* 35, a 3-para; last child five years ago; one miscarriage two years ago at the sixth week; convalesced perfectly after that. Became pregnant again about April, 1903. A month after, a slight red flow set in and continued until December 12th, when after a smart hæmorrhage a vesicular mole weighing one and three-quarter pounds was brought away with the curette by Dr. Forster. There was no red flow for three weeks after this, when it came on very freely, and recurred two weeks afterwards, and again two weeks after that; this latter was a flooding which nearly proved fatal. Dr. Forster was obliged to curette for the second time, again bringing away a considerable quantity of débris. A cessation of the hæmorrhage for another period of three weeks followed, when it again recurred eleven days prior to seeing me, and continued on and off up to that time. Dr. Forster reported that the uterus was increasing in size, and that in his opinion there was probable malignancy. The patient stated she had lost some flesh, but had always been thin. The discharge had always been free from odour.

P.C.—Very thin; very anæmic; pulse 144, very weak; uterus the size of a two months' pregnancy, movable, soft, not tender; os patulous; cervix short; serous discharge.

I recommended curettage with examination of the scrapings as a first step. This was done under ether the following day, April 30th; a large quantity of apparently decidual tissue being removed easily, but with much hæmorrhage. The uterine walls were left perfectly smooth and firm. (I have always noted in curetting ordinary adenocarcinoma of the uterus that the walls could not be made perfectly smooth.) Convalescence following this operation was good, all discharge ceased, and the patient expressed herself as feeling very well. She was told to report herself in two weeks or sooner if the hæmorrhage returned. She failed to do so, and I should probably not have seen her again had it not been for Dr. Forster's influence with her husband, who came to Sydney and insisted on his wife coming to consult me again on June 23rd, nearly two months' after my curettage. It appears she had remained well for a month following this and had gained flesh, but the bleeding then returned and had continued to present. She had lost all the flesh she had gained and more. The uterus had evidently again increased in size; it was soft and elastic to the feel and still fairly mobile. With some trouble they consented to the radical operation.

On July 2nd, just two months after my curettage, I removed the uterus by vaginal hysterectomy, also both appendages and an extensive portion of each broad ligament. I had intended doing abdominal hysterectomy, but the low condition of the patient led me to change my mind at the last. The vagina was free from metastatic growths, and to the naked eye the disease was confined to the corporeal endometrium, which was the seat of a soft, vascular, friable growth the size of a small orange, having but a loose connection with the endometrium, and capable of being cleanly removed from it by the finger-tip.

The patient made a good recovery and seemed so well at the end of a week that her husband returned home. The colour came back to her cheeks, and she began to gain a little flesh. Two weeks afterwards, however, pain set in over the liver, the temperature rose slightly, the pulse quickened, all her returning cheerfulness vanished, and she began to go down hill. Towards the end of the month I made out a mass in the right hypochondrium, with dulness and diminished respiratory murmur over base of right lung. P.V.—Examination showed the pelvis to be perfectly normal.

On August 4th, five weeks after the hysterectomy, she died, having had a very severe attack of pain in the liver that morning. She was comatose for one hour before death, and had been slightly delirious for several nights previously. The urine remained normal to the last. Nothing would induce the husband to consent to a post-mortem.

It will, I think, be admitted that Dr. Forster is entitled to much credit for his straight-out diagnosis from the clinical evidence alone. Perhaps if I had acted on it at once, instead of seeking to verify it by curetting myself, the ultimate result might have been better, but in all probability the patient would have refused the major operation at that time, and in any case I was responsible for only three weeks' delay; the other five weeks were lost by the patient's own wilfulness.

I must also express my indebtedness to Dr. Windeyer for kindly examining the scrapings. His diagnosis of deciduoma malignum, from the microscopical appearances of these, greatly stimulated me to try and rediscover the patient.

Deciduoma malignum was first described by Sanger in 1889, and since then upwards of 190 cases have been recorded. Chorion-epithelioma is admitted to be the more correct term, as it indicates the source and nature of the growth, but the other name has been sanctioned by usage. It may be defined clinically as a hæmorrhagic tumour, occurring usually in comparatively young women, occupying the cavity of the uterus as distinguished from the cervix, characterised by its association with pregnancy (but more often following abortion than full term pregnancy, and peculiarly prone to follow vesicular or hydatidiform mole) by great malignancy, by metastases locally, and in remote parts of the body (in which it is disseminated by the blood-vessels and not by lymphatics), and by necrosis and formation of blood spaces.

There appears to be only two English cases so far which have been cured by operation. (hysterectomy), but there are all degrees of malignancy in this growth. Usually after curetting the uterus fills up again in two or three weeks with the growth, exactly as in my case, but occasionally there is a period of quiescence for a year or more.

The symptoms are irregularly recurring hæmorrhages, progressive anæmia and cachexia, and sometimes pyrexia. The anæmia in my case reminded me strongly of the appearance presented in pernicious anæmia.

The most striking fact in the clinical history of this growth is that in more than half the cases it is preceded by hydatidiform mole. Hydatidiform mole occurs about once in every 2000 cases of pregnancy.

Clinically and histologically benign and malignant moles are in close resemblance; it is said indeed to be impossible to distinguish between the proliferation of the chorionic epithelium in a simple mole and that in a malignant one; but this aspect of the question Dr. Windeyer will deal with more fully. It is clearly then our duty to keenly watch every case of hydatidiform mole as a condition which is not unlikely to prove in the highest degree malignant. The patient should be warned to report herself every month for at least a year or even longer.

There are many other points well worthy of consideration, but I hope I have said enough to arouse interest and to make it unlikely that a case of this kind should be overlooked and the golden moment for interference lost.

During my twenty years' practice in Sydney I have attended nearly two thousand cases of midwifery, and probably a greater number of abortions. So far as I know I have never previously met with a case of deciduoma malignum, yet I possibly may have missed such a one. I can recall several instances of hydatidiform mole, and present a specimen of this disease which I removed by the curette some years ago in consultation with another practitioner. He informed me shortly afterwards that the patient convalesced well, but died suddenly six weeks after the curettage of "apoplexy." Possibly this was an instance of brain metastasis. Another case died of hyperemesis; the uterus was emptied, but too late to avert a fatal issue.

The chief diagnostic point in hydatidiform mole prior to the expulsion of cysts is the enlargment of the uterus out of all proportion to the supposed period of pregnancy. This, especially when associated with hyperemesis, should always afford grounds for the gravest consideration.

Much of my information on this subject I have derived from an exhaustive paper by J. H. Teacher in "The Journal of Obstetrics and Gynæcology of the British Empire."

Pathological Report by J. C. Windeyer, M.B., Ch.M. (Syd.), M.R.C.S., L.R.C.P. (London), Honorary Assistant Surgeon Hospital for Women, Paddington, Sydney.

The specimen which is shown to-night consists of the uterus and appendages, which were removed by vaginal hysterectomy. The uterine cavity has been opened from cervix to fundus through the anterior wall, and is 3¾ inches in length; part of the elongation is probably due to traction on the cervix during removal.

In the upper part of the anterior wall of the uterus and reaching as far as the fundus, there is a mass of growth which has been cut in two by the incision opening the uterine cavity. The growth, which projects markedly from the uterine musculature on the cut surface, is roughly oval in shape and measures 1¾ in. by 1½ in., with its longer axis corresponding to that of the uterus. It consists of a mass of soft pinkish tissue, which contains numerous hæmorrhages, and towards the uterine surface is covered with blood clot. Anteriorly the growth approaches within ¼ in. of the peritoneal surface. The Fallopian tubes are both slightly convoluted, and show signs of old salpingitis; the tubal ostia are contracted.

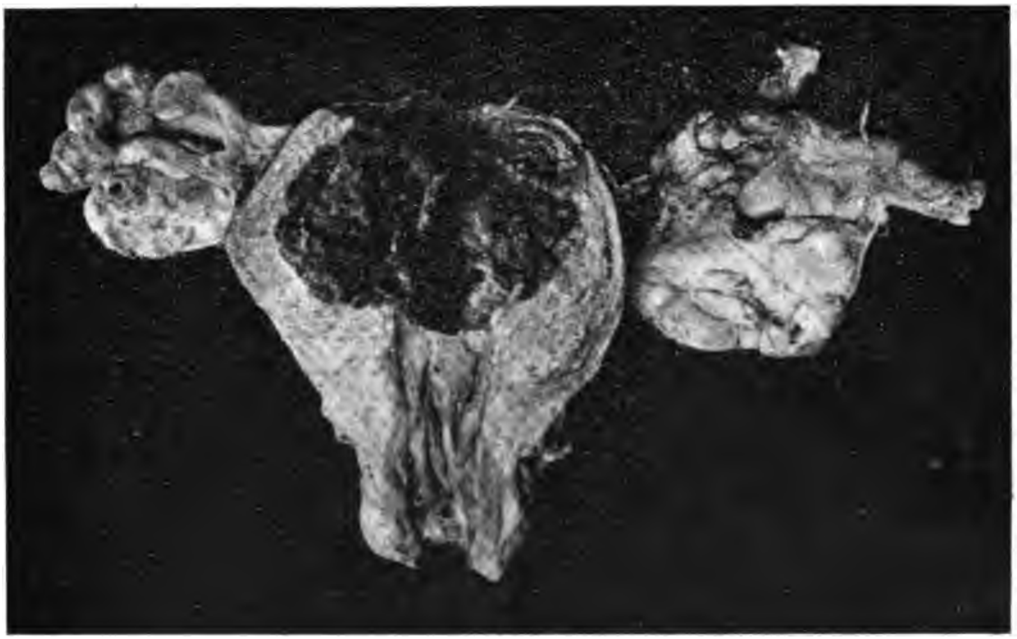
The ovaries are normal in appearance, the left being larger than the right, due to the presence of a corpus luteum cyst about ¾ in. in diameter. In the right broad ligament just behind the origin of the round ligament and about ½ in. away from the uterus there is a small rounded nodule, and in a similar position on the opposite side a small hæmorrhage.

On naked eye examination the growth presents a honeycomb-like appearance, being made up of bands of tissue enclosing cavities varying in size from that of a split pea downwards, most of them being pinhole size. Throughout the mass one sees hæmorrhages, some old and some recent. An incision was made into the nodule in the right broad ligament, and a small mass, which was encapsuled and shelled out readily, was found; this contained a small hæmorrhage.

Pieces of tissue for microscopical examination were taken from (1) the centre of the growth; (2) through the anterior wall, including growth and musculature; (3) through the fundus, showing the junction of malignant mass with the mucous membrane; (4) the nodule in the right broad ligament; (5) the hæmorrhage in left broad ligament; and (6) the right ovary. These were hardened in 5 per cent. formalin and embedded in paraffin; stained with hæmatein, and counterstained with eosine or Van Gieson.

Microscopical Appearance.—The centre of the growth shows well the honeycomb appearance visible to the naked eye; the cavities for the most part are empty, but in places you see blood cells and fibrin.

The tissue forming the walls of the cavities is composed of two main varieties of cells: (1) large pale staining vesicular cells, with a single nucleus and distinct cell boundary. (2) irregular protoplasmic masses containing nuclei of various shapes and sizes, generally staining darkly. These masses have no distinct cell boundaries, but in places have large vacuoles, which give the appearance of cells. There is no connective tissue stroma in the growth, which accounts for its friability. Many of the cells show signs of degeneration, and in places there is complete necrosis. At the periphery the same two varieties of cells are seen in a more active stage, the nuclei being larger and stain more deeply. In some places the Langhan's layer cells predominate, in others the syncytium. The growing edge is irregular, and isolated tumour cells are seen away from the rest of the growth. The cells are seen penetrating blood-vessels, growing along their walls, and filling up their lumen, thus easily allowing metastasis to take place. The mucous membrane of the uterus is normal in appearance away from the tumour, near the edge the glands are dilated, probably from pressure on the ducts, whilst over the growth the glands are mostly destroyed, and the connective tissue cells have taken on the characteristics of decidua cells.

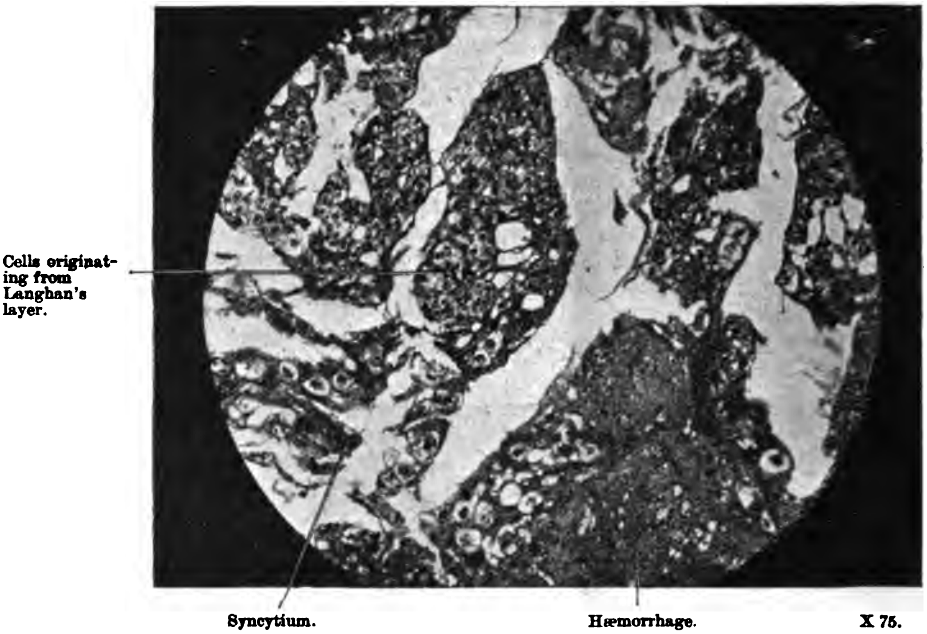


"DECIDUOMA MALIGNUM."

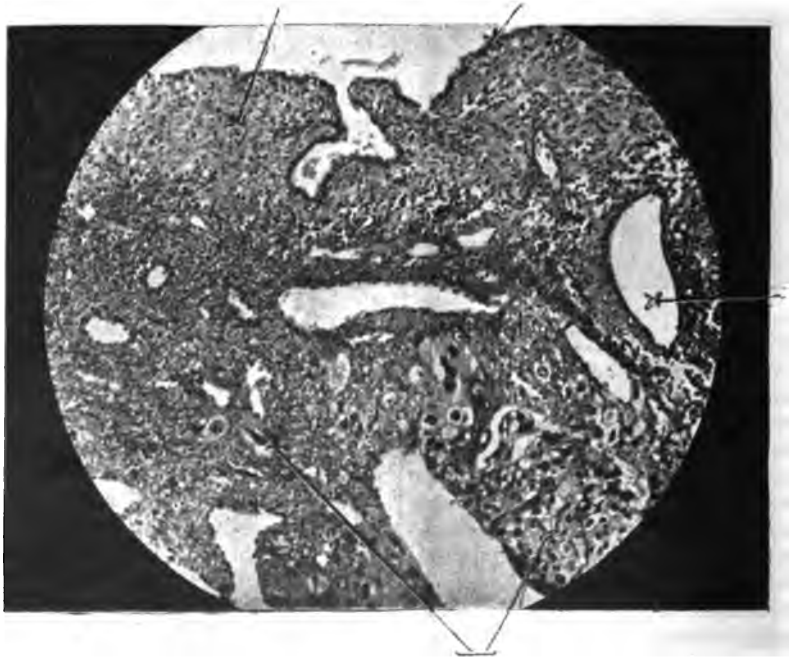
The nodule in the right broad ligament shows at parts of its periphery a band of cells similar to those in the primary growth, the central part is composed of loose areolar tissue with malignant cells scattered through it, and in the centre there is a small hæmorrhage with malignant cells round it.

The hæmorrhage in the left broad ligament on section showed recent hæmorrhage, due to trauma during removal. The right ovary showed a small corpus luteum with a few lutein cells.

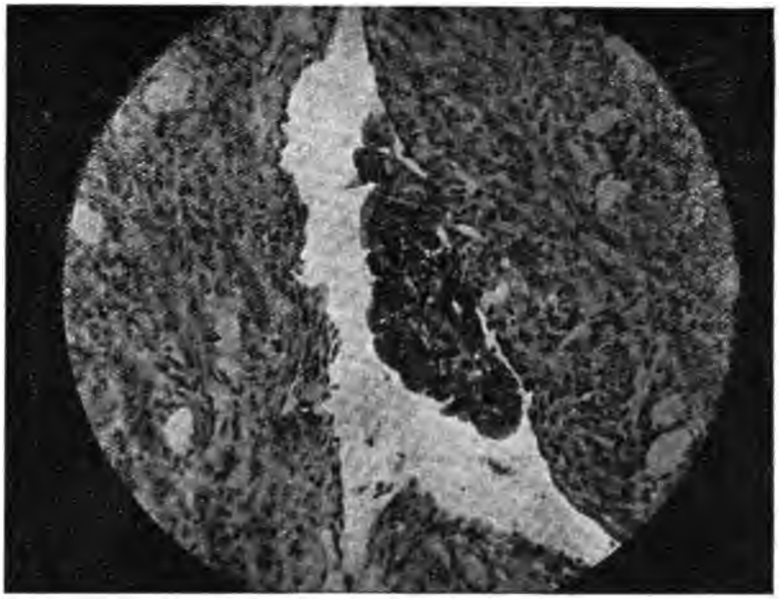
Pathology.—This variety of new growth was first described by Sänger, of Leipsic, in 1888, and independently by Pfeiffer in 1890; they both described it as a malignant degeneration of the decidue—hence the name deciduoma malignum, a term which is used commonly at the present time. Various other names have been given and various origins assigned to the growth since that time, due to the want of knowledge as to the origin of the two layers of cells covering the chorionic villi, viz., Langhan's layer and the syncytium. In 1899, Peters, of Vienna, described a human ovum of two or three days' growth, and gave his opinion that both layers are fœtal and epithelial in origin. Most authorities seem to have agreed with this, and so the tumour is now classed among the carcinomata, under the term chorion carcinoma. In the normal villus you see a central core of connective tissue surrounded by two layers of cells, the inner one, or Langhan's layer, is composed of separate cells, and the outer, or syncytium, is plasmodial in character, with the nuclei generally arranged in a single row, but in places forming buds, the so-called placental giant cells. The syncytium separates Langhan's layer from the blood in the inter-



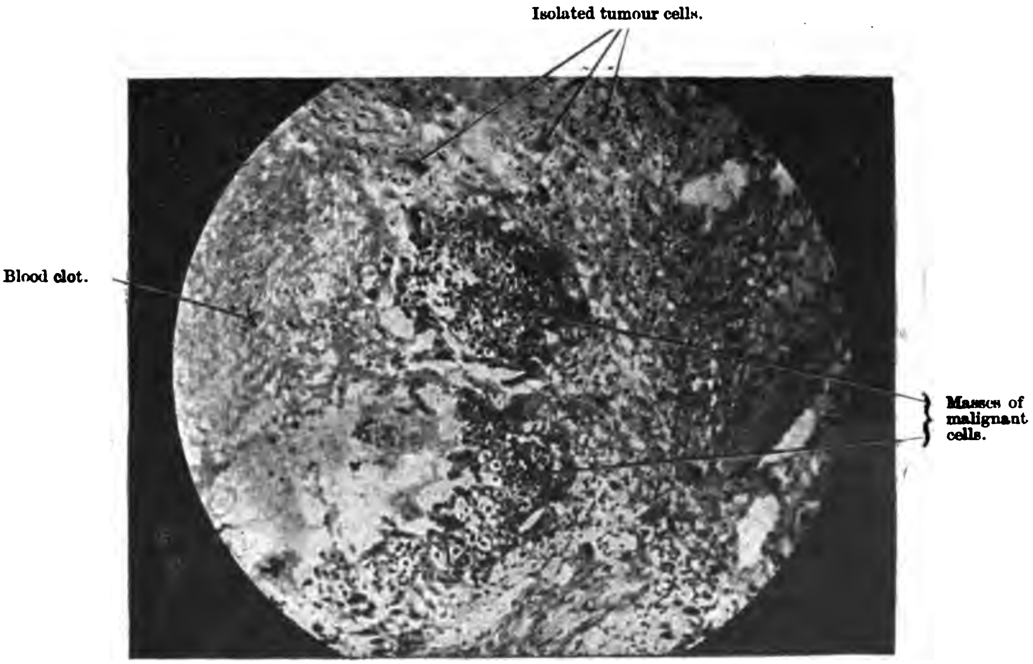
CENTRAL PORTION OF TUMOUR.



SHOWING GROWTH BENEATH THE MUCOUS MEMBRANE OF THE UTERUS.



X 150.
MALIGNANT MASS IN A VEIN AWAY FROM THE EDGE OF THE GROWTH.



SECONDARY NODULE, RIGHT BROAD LIGAMENT. X 75.

villous space. The villi, even in normal pregnancy, have the power of penetrating deeply into the maternal tissue, and are found surrounded by proliferating syncytium and Langhan's cells deep in the musculature of the uterus.

In hydatidiform mole, which precedes chorion carcinoma in at least 50 per cent. of the cases, there is a marked proliferation of the two epithelial layers with a dropsical swelling of the connective tissue core. This hypertrophy of the epithelial layers leads to marked infiltration of the musculature, with villi and fœtal elements.

In some cases of chorion carcinoma, villi have been found in the wall of the uterus with malignant cells growing from them, thus proving the origin of the growth from the fœtal epithelium. There seems to be some connection between this tumour and cystic conditions of the ovary and corpus luteum, and some observers think that the internal secretion of the corpus luteum stimulates the growth of the fœtal elements. In this case there is one large corpus luteum cyst in the left ovary and two small ones in the right.

In conclusion, I must thank Professor Wilson for permission to have the microphotographs taken at the anatomical department of the Sydney Medical School.

(Read before the New South Wales Branch of the British Medical Association.)

SUGGESTIONS AS TO THE PATHOLOGY OF ACUTE ANTERIOR POLIO-MYELITIS.

By E. A. Falkner, F.R.C.S. (Eng.), Toowoomba, Q.

THE recent epidemic of acute anterior poliomyelitis which has occurred in many places in New South Wales during the first half of this year seems to have commenced in Sydney in November and December, 1903 ; from there it radiated over the country, attacking a large number of inland towns ; cases occurred in the autumn at Armidale and Glen Innes, and the disease made its appearance in Toowoomba about the middle of April ; apparently it passed over Warwick, and does not seem to have reached Brisbane as yet.

The symptoms and course of the disease have been sufficiently discussed in various papers in the *Australasian Medical Gazette*, and there is no necessity to repeat them. There are, however, some points about the pathology which are not yet explained and which are well worth considering ; it is this part of the subject that I wish to bring under your notice this evening.

Though no germ has as yet been isolated as the *fons et origo*, it will, however, be generally conceded from the clinical history of the cases and from the occurrence of epidemics that there is a specific germ ; the nature of this germ is one matter for consideration. Secondly, the disease is essentially one of early childhood, as is sufficiently evidenced by the various reports of this epidemic ; and Starr, in "Albutt's System of Medicine," shows that out of 600 cases over 550 occur in the first five years of life. Why should this be the case ? Thirdly, the lesion has been shown to be in the neurones of the anterior cornua of the spinal cord. Why should the germ select this area, presuming that a germ is the cause ? It is a well-recognised fact that certain germs have a predilection for certain organs of the body ; the typhoid bacillus flourishes in the glands of the small intestine, the pneumococcus in the lungs, the diphtheria bacillus prefers the throat, and the tubercle bacillus, though formed in other organs, certainly seems to prefer the lungs.

In the case of the meninges of the brain and spinal cord there is a diplococcus called the diplococcus intracellularis capsulatus or D. meningitidis, which flourishes there, and has been shown to be the cause of cerebro-spinal meningitis. In the last few years it has also been isolated in the simple meningitis of infants, which the authors describe as a distinct disease, but which, in the light of this discovery, Osler seems to consider should be classed as a variety of cerebro-spinal meningitis. Might it not be the case that the disease we are considering may also be caused by this germ, and may, therefore, be also classed under that heading ? It may be argued that clinically they are distinct diseases, and that, if an epidemic were about, there would be both varieties occurring together if they were both the same disease or due to the same cause.

In reply to this the simple meningitis of infants has been elaborately described in "Allbutt's System of Medicine" as a distinct disease from cerebro-spinal meningitis, yet it is now considered by Osler as a sporadic variety of the latter affection, and secondly, cases have occurred in this epidemic which, besides the paralytic manifestations, had undoubtedly symptoms of meningitis, and in some cases were purely cerebro-spinal meningitis, without any paralysis at all. In connection with this I will describe two cases that were under my notice, and which led me to reflect on the subject:

A girl, aged four, was brought in to see me from a place 20 miles away, with the following history: She was apparently well until five or six days before, when she was suddenly taken ill with headache, sore throat, vomiting, and feverishness; she then seemed better for three or four days, until the day before I saw her, when the symptoms recurred. She had no convulsions, but was very restless at night. When I saw her, she complained of pains in head and legs. She lay on her back, with head markedly thrown back and held very stiffly, not turning it at all nor flexing it. Pulse 144, respiration 44, temperature 102·2°; tongue coated, suspiciously like an enteric tongue; pupils normal; knee-jerks normal; no paralysis. The temperature remained up for the next few days, and she still complained of pains in legs and held her neck rigid; weakness of anterior tibial muscles was noticed two days after, which extended during the next few days to most of the muscles of the trunk and limbs. Temperature fell to normal, but head remained retracted for over a week, and for some time there was much pain on any attempt to move limbs in any way. The feet were fully extended and markedly resisted flexion. In this case the retraction of the head, which was very manifest, and the marked pain in the limbs, pointed to meningitis before the onset of the paralysis.

The second case was that of a boy, aged seven. His mother stated that he had been out of sorts lately, irritable, bad tempered, not inclined to play, and complaining of pains in the left side and in abdomen, and sometimes seemed to hold his head stiffly. Bowels were quite regular; pain was worse at night, causing him to cry out loudly; he was very restless; not sleeping well. Pulse 84, temperature normal; no pain or tenderness anywhere when I examined him; tongue very coated. The next day he seemed all right in the morning, but in the evening he complained of very severe pains in back and left side. He quieted down when I spoke to him, and said at once he had no pain, though a minute before he had been yelling with it; his temperature was still normal and pulse 88. The pain recurred during the night, and at intervals during the next day or two. On the evening of the third day after I first saw him, his temperature rose a little for the first time, being 99°; his pulse was 130. During the next few days his temperature gradually rose as high as 103°, and then fell, reaching normal after five days; the pain became localised to the lower lumbar vertebræ; there was tenderness on pressure over these spinous processes; there was considerable twitching of arms and legs, and much restlessness; the muscles of the neck were then found to be rigid, head held very stiffly, and there was tenderness over the cervical spines, slight deafness and photophobia were also present, but no paralysis and no vomiting. Tongue was coated, papillæ showing; pulse rapid, The symptoms gradually subsided, but after he had been up for some time, some dragging of one leg was noticed, but no actual paralysis of any muscles.

Now this appeared to be a case of cerebro-spinal meningitis in a mild form, and in this diagnosis Dr. Freshney and Dr. Turner, of Brisbane, both concurred. While this boy was ill, his younger brother, who, as a rule, slept all night without waking, feared nothing, and would play all day, began to be very restless at night, waking up continually and yelling out; was afraid to sleep by himself, and during the day was listless and disinclined to play, so that his mother was convinced he was developing the same illness as his brother, but his symptoms all passed off in a few days; still, I think it highly probable he had a slight touch of meningeal irritation at least.

Another case had a distinct blotchy rash over chest and abdomen. The remaining cases under my care were ordinary cases of anterior poliomyelitis. Dr. Harris, of Armidale, tells me that in association with this epidemic he had one case of cerebro-spinal meningitis, and another, a fatal case, had marked meningeal symptoms as well as the paralysis. Apparently in other towns similar cases have occurred, so much so that in Taree the epidemic was described as one of cerebro-spinal meningitis, and in Albury as "purpuric fever," another name for this disease, the rash having evidently been very manifest in the case occurring in that town. McPherson, of Young, mentions (*Australasian Medical Gazette*, August 20th, 1904) one case as having a blotchy rash all over the body similar to what occurs in cerebro-spinal meningitis. At Moruya two deaths from cerebro-spinal meningitis were certified.

D. H. McKenzie, describing an epidemic of anterior poliomyelitis (*Medical Record*, Oct. 10th, 1902), says that out of 17 cases only two presented the classic symptoms of poliomyelitis; one case was undoubtedly cerebro-spinal meningitis. It thus would appear to be the case that in epidemics of anterior poliomyelitis there are several cases that are purely cerebro-spinal meningitis and not anterior poliomyelitis, and others that could be classed under either heading.

On the other hand one would expect to find cases resembling anterior poliomyelitis in epidemics of cerebro-spinal meningitis if this hypothesis be correct.

From the account given of the latter disease in Rotch's Pediatrics, which account was taken from a careful report to the Massachusetts Board of Health on an outbreak of cerebro-spinal meningitis in Boston in 1895, it would appear that there were cases in that outbreak which resembled anterior poliomyelitis, and he proceeds to say: "According to Bullard these cases, which at times and in certain stages precisely resembling cases of paralysis occurring in anterior poliomyelitis, are to be distinguished clinically from the paralyses of this disease by the following conditions:—

1. In cases of paralysis following cerebrospinal meningitis we find that pain on passive motion of the limbs persists to a degree rarely, if ever, found in anterior poliomyelitis. Such pain and tenderness sometimes exist during the acute stage of anterior poliomyelitis for two or three days, but if they last longer than a week the case is one in which the diagnosis is to be carefully considered. It is not uncommon on the other hand for great pain on passive motion of the limbs or of certain joints, especially the ankles, to exist in cerebro-spinal meningitis for one, two, or three months after the acute stage of the disease has ceased. Tenderness on pressure over the muscles also persists much longer in anterior poliomyelitis, where it rarely continues much beyond the acute stage, but does not last as long as the pain on motion, active or passive.

2. *The character of the paralysis* also differs, at least in the early stages, though later it is often nearly indistinguishable. There is always a tendency to spastic contracture in the early stages of the paralysis of cerebrospinal meningitis. This is sometimes so marked that it is evident on casual examination. Certain portions of the limbs are flexed, and there is decided muscular resistance to passive motion, due to a permanent tonic contraction. More often, particularly in the latter stages, this tonic or spastic condition is not so evident, and shows itself only or principally in the extreme degree of flexion at the ankle-joint, the foot often being in a position of equinus, and its axis almost in direct continuance with that of the leg.

3. The knee-jerk is usually less affected than in the anterior poliomyelitis; in other words, there seems to be a greater tendency to retain the knee-jerks. This is rather a question of degree than anything else, and may have been accidental in Bullard's patients; he lays stress on it only in connection with other symptoms.

4. In addition to these clinical signs we have the history of the initial attack to guide us. While certain cases occur in which it is difficult to determine the character of the initial attack as a rule, the existence of retraction of the head and of contractures of the muscles of the back or limbs, the continued presence of extreme tenderness of pain on movement, and the duration of the acute stage of the disease, enable us to determine more or less accurately the character of the disease."

These fine points of differentiation sufficiently show that considerable difficulty exists sometimes in diagnosing between the two diseases in certain cases. According to this description the first case I mentioned to you would be rather one of cerebro-spinal meningitis with paralytic symptoms than anterior poliomyelitis. Reflecting on all these facts it would appear that it is at least worth consideration as to whether these are two distinct diseases or whether epidemic anterior poliomyelitis should not be considered a variety of cerebro-spinal meningitis in the same way that the simple meningitis of infants is so considered.

The next point I desire to bring under your notice is the age at which this disease is most prevalent. All authorities seem to agree that it is very rare under six months, it is most prevalent during the second and third years, and apparently uncommon after the fifth year. Now, it is precisely at this period that one would expect the nervous centres that supply the muscles to be most active, as the child is then learning to use the various muscles and how to co-ordinate them. As far as one can gather, the simple meningitis of infants is most prevalent in the first two years of life, while the cerebro-spinal meningitis seems to have the maximum number of cases at a later period than the disease we are considering, so it seems possible that the character of the affection may vary according to the age of the patient.

Lastly, as to the seat of the lesion, it has been shown in the few cases that have died early in the disease that there was some inflammation of the meninges, particularly of the pia mater, that the arteries of the cord, particularly the main one passing into the anterior commissure, were surrounded by leucocytes, which also filled the lymph spaces in the neuroglia, and those surrounding the neurones of the anterior cornua.

According to Quain the lymphatics of the cord run in the tunica adventitia of this vessel, connecting the lymphatics of the pia mater, on the one hand, with the lymph spaces in the neuroglia and surrounding the neurones, on the other. At the period when the neurones would be most active, it is conceivable these lymph spaces would be larger and the lymph flowing more actively; germs have a special predilection for following lymphatic channels, and the microscopical examination shows that there is an inflammation spreading from the meninges along this lymphatic channel to the spaces round the neurones.

Lastly, as to how the germs reach the meninges is still *sub judice;* it has been suggested that in the posterior basic variety of meningitis they pass from the naso-pharynx along the lymphatics that accompany the Eustachian tube and which are known to communicate between those of the naso-pharynx and those of the meninges; this seems possible, and at the time the epidemic occurred in Toowoomba there certainly was an epidemic of severe colds and post-nasal catarrh, which was not influenzal.

The argument, therefore, which I wish to bring under your consideration is that the germ called diplococcus meningitidis enters the system by the nose and naso-pharynx, that in certain cases, more particularly children, it passes by the lymphatics accompanying the Eustachian tube to the meninges at base of brain and thence to the meninges of spinal cord, setting up a meningitis of greater or less extent; at the age when probably the nervous supply of the muscles is most active and the lymph circulation more marked, the germ may spread along the lymphatics to the neurones of the anterior cornua and give rise to the affection called acute anterior poliomyelitis, which would thus be classified as a variety of cerebro-spinal meningitis rather than a distinct and specific disorder.

(Read before the Queensland Branch of the British Medical Association.)

A CASE OF ACUTE MYELOCYTIC LEUKÆMIA IN A CHILD.

By J. M. Gill, M.D. (Lond.), Hon. Physician and Pathologist to the Children's Hospital, Sydney.

R. A., a boy, aged three years and two months, was admitted into the Children's Hospital, Sydney, under my care on August 14th, 1903.

The Previous History.—He is the eldest child of the marriage and has always been healthy, except for a brief sickness eight months ago of the nature of gastro-enteritis. He appears to have recovered from it completely, after a week or a fortnight's illness.

Family History.—Mother and father are both healthy; there is no history of syphilis in either parent.

History of Present Illness.—The child has been pale for about a year, but no particular notice was taken of this. The present illness came on gradually about two months ago, with pallor of the skin and loss of appetite; there has been no wasting. There have been no hæmorrhages.

On Admission.—The child has a waxy complexion, and the lips and mucous membranes are pale. There are various black and blue marks about the body. Petechial spots are widely diffused all over the body. The teeth are dirty, and several are carious. The gums are fairly healthy; the tonsils are not enlarged; there is no membrane on them; he is well nourished.

Abdomen.—The bowels are constipated. The abdomen is flaccid, and not distended. Neither liver nor spleen can be felt. The liver dulness is normal.

Chest.—The heart and lungs are normal; there is a hæmic murmur in the pulmonary area.

Lymphatic Glands.—The submaxillary glands on either side are enlarged to about the size of a pigeon's egg; the other cervical glands are palpable, but are no larger than is often the case in healthy children. The glands in the other parts of the body are not enlarged. There are no signs of congenital syphilis or of rickets; there is no tenderness of the bones.

Urine.—1028, acid; there is a faint cloud of albumen, but no sugar.

On August 18th there was a considerable epistaxis, which, however, soon stopped.

On August 28th he became very restless and vomited everything he took. Respirations became shallow and rapid. Death took place

BLOOD COUNTS IN MYELOCYTIC LEUKÆMIA IN A CHILD.

Date.	Red Cells.	White Cells.	Polynuclear. Per cent.	Lymphocytes. Per cent.		Myelocytes. Per cent.	Remarks.
				Large.	Small.		
Aug. 15	1,900,000	34,800	*32	41		25	Very few nucleated red cells; eosinophiles, 2 in 250.
Aug. 20	?	?	17	25	20	34	Transitional forms 3%; eosinophiles very few; no nucleated red cells.
Aug. 24	1,000,000	70,000	18	14	26	40	Eosinophiles, 1%; no nucleated red cells.
Aug. 25	1,000,000	115,000	18	6	27	45	Eosinophiles, 2%; no nucleated red cells.

* Decimal points have been omitted from all the differential counts. No hæmoglobin estimations were made. No megaloblasts were seen, but the red cells showed great variety of form; some megalocytes were present. Large mononuclears were included under the heading of large lymphocytes. No mast cells were found in any of the films.

at 8 p.m., and was apparently directly due to the anæmia.

His physical condition remained unaltered during his stay in the hospital; the spleen was never palpable, neither was the liver enlarged; the lymph glands remained as on admission. He took his food fairly well up to the day before death.

The temperature throughout showed a moderate elevation, generally falling to the normal or 99° in the morning and rising to 100° or rather more at night; the highest point reached was 100·8°. No post-mortem examination was allowed.

Remarks.—The stains used for the blood films were Ehrlich's triacid solution, after fixation by heat for an hour at a temperature of 120° centigrade; aqueous eosine and aqueous methylene-blue, after fixation with 1 per cent. formaline in 90 per cent. absolute alcohol; and Jenner's stain. The triacid was found to be the most satisfactory of all, and, in fact, really essential to the making of an accurate differential count. The staining with eosine and methylene-blue was soon abandoned, as the results were not uniform; it was found practically impossible to distinguish between the large lymphocytes and the myelocytes, as the neutrophile granulations were not satisfactorily stained. Jenner's stain was found to be very useful, the neutrophile granulations being well stained of a reddish colour. In practice it was found best to stain one film with the triacid and another with Jenner's stain, the latter bringing out well the protoplasm of the lymphocytes and the mast-cell granulations. In using Jenner's stain it is essential to use a recently prepared solution, as it quickly loses its power of staining the neutrophile granulations; for this purpose the soloids, as supplied by Burroughs and Wellcome, are very convenient. Sufficient directions for the use of the stain are sent with each tube of soloids. Jenner's stain is by far the most convenient for ordinary clinical purposes, as no preliminary fixation is necessary, and the whole process of staining does not take more than five minutes. On the other hand, if a proper apparatus for the fixation of films with heat is available, the triacid stain should be used, at least in cases where myelocytes are present or expected to be present.

Acute leukæmia is almost always of the lymphatic type. Pinkus, writing in Nothnagel's *Specielle Pathologie und Therapie* (1901), says most distinctly that all the cases of acute leukæmia hitherto recorded had been of the lymphatic form. Da Costa and Cabot, in their books on "Hæmatology," mention no cases of acute myelocytic leukæmia. Ewing (1903) in his "Clinical Pathology of the Blood," clearly recognises the acute form, and quotes three cases. Billings and Capps, writing in the September number of the *American Journal of the Medical Sciences*, record a case occurring in a man of 68, and quote eight others from the literature. None of these are in children. Billings and Capps lay great stress on the indistinct granulations in the myelocytes in their case. Ewing notices the same point in his three cases. In the case now recorded, the granulations of the myelocytes did not differ from those ordinarily seen in leukæmia; no doubt many of the myelocytes were only slightly granulated, but any leukæmia film will show the same thing. Perhaps the differences in technique may account for the differences in observation. Billings and Capps do not mention the methods of fixation and staining they used; but it appears that the granulations are brought out best by prolonged fixation at a low temperature, viz., one to two hours at 120°, followed by staining with the triacid solution for ten minutes at least.

To summarise the features of the case: Clinically, these were marked pallor, widespread small hæmorrhages, no enlargement of the spleen or liver, slight enlargement of the submaxillary lymph glands, but none of any other lymph glands that are ordinarily palpable. The blood changes were:—well marked leucocytosis, showing a large proportion of myelocytes, a small percentage of eosinophiles, but no mast-cells, mononuclear eosinophiles, or nucleated red cells. The clinical features and blood changes agree very much with the previously recorded cases. In conclusion, my thanks are due to Dr. Wallace, formerly Resident Medical Officer at the Children's Hospital, for his zealous assistance in the examination of this case.

(Read before the New South Wales Branch of the British Medical Association.)

A CASE OF BILHARZIA HÆMATOBIA.

By H. C. Hinder, M.B., Ch.M., Hon. Surgeon, Royal Prince Alfred Hospital, Sydney.

The following is the history of a case of bilharzia hæmatobia which came into the Royal Prince Alfred Hospital a short time ago:—

The patient is a young man, 21 years of age. He is pale, and by no means in robust health. He went to South Africa with a contingent in 1900. He remained there for two years, spending most of his time in the North Transvaal. He was ill with what he was told was malaria during August and September, 1901, but he has had no attack since. In June, 1902, he first showed signs of the disease from which he is now suffering. He states that he had absolutely no pain, but merely observed that the last few drops of urine were tinged with blood. This sign has remained constant, and has accompanied almost every act of micturition since the onset.

About five months ago he began to pass urine more frequently during the day, and was also compelled to get up and micturate once during the night. The frequency has increased, and he now passes his urine every three hours. About three months ago he was induced to play a game of football, and for two weeks afterwards he experienced a persistent pain in the lower part of the abdomen, which was increased by any jar or jolt. I knew that a sound had been passed and had been followed by hæmaturia, so that the cystoscopic examination was conducted with the greatest possible care. The appearance of the bladder wall was certainly like nothing else that I have hitherto seen. Round about the trigone and the base of the bladder appeared irregular strawberry-like raised areas. The dull red colour of these areas faded away to the faint yellowish rose pink of the normal bladder wall. There was very little absolutely normal bladder wall to be seen in this case, for the whole surface was patched by areas which presented very characteristic features. Here and there white raised points were to be seen about the size of a miliary tubercle, but some of them surrounded by a hyperæmic zone, while others appeared to give rise to no reaction whatever. Alongside these would appear hyperæmic patches without any evidence of the white centre, or perhaps with a slight denudation of surface, and again here and there a tiny bright red clot gave th impression that a hæmorrhage had taken place and that the vessel had been closed by means of a clot. In fact it would seem a if the bladder wall was fairly riddled, that the little white points were ova beneath the mucous membrane, which on rupturing gave rise to tiny hæmorrhages and small ulcerated surfaces, and later, following upon further infection, to the tuberose condition I have already referred to.

In the accompanying coloured sketch I have endeavoured to give you some idea of the appearance of the bladder wall. The ova are easily recognised with the low power, and if the urine is gently warmed the embryos may be seen hatching. The early history of this case appears to indicate that bilharzia is another disease, at all events in its earlier stages, to be added to the list of symptomless hæmaturias, and upon which a visual inspection of the bladder wall throws considerable light. Fortunately, too, a microscopic examination of the urine is of great diagnostic value.

It is said that if there are no further infections the disease will die out in a few years. Treatment resolves itself into dealing with associated complications as they arise. Meddlesome interference in mild cases is to be deprecated.

I am indebted to Dr. Smith, the resident pathologist, for the following notes, which represent the results of the most recent work which has been done in connection with bilharzia.

Theory of Professor Loos, of Leipsic, at present Working in Cairo.—The worm has two stages in its life history—one in man; the other, at one time said to occur in fresh water molluscs, now supposed to occur in man, so that man himself is his own intermediate host. The eggs are laid by the female most commonly underneath the mucous membrane of the bladder, thence finding their way via urine to fresh water, in one or other of which the free swimming embryos hatch. Thence through the skin (of man) they find their way to the liver, and here undergo the intermediate phase of their life cycle. After a time, the worm enters upon the second stage in its life history, escapes as a unisexual organism into the blood stream, and, working against the blood stream travels downwards, and finally lodges in the small capillaries under the mucous membranes of intestine, rectum, or bladder. Less commonly, the worms slip into other parts of the circulation, and so are found variously in the broad ligament, uterus, vagina, and vulva of the female, in the urethra and penis of the male, and, in fact, they have been found in every part of the abdominal system except the stomach and duodenum. The male and female worms copulate by the male taking the female into its gynæphoris canal and closing in upon it. The female is firmly fixed by its middle portion, is fertilised, and it is thought, by stretching out to its full extent, discharges its eggs from the germinal opening immediately under the mucous membrane of the viscus or organ involved. Thus in the bladder the parent worms are always found just near the muscular coat, and the eggs immediately under the mucous epithelium. The parent worm has never been demonstrated as near to the surface as this, and Loös accounts for the eggs being laid in the position indicated by the female stretching itself out to the full extent of its length and elasticity. These deposits of eggs as they increase in size encroach more and more on the bladder epithelium, until at last they break through; a small ulcer is formed, and the eggs pour out into the lumen of the bladder and mix with the urine.

This theory of the life history is at present only hypothesis, the imperfect links in the chain of evidence being those in regard to the intermediate change in the liver. The balance of probability is largely in favour of this, and Loös hopes to definitely establish this fact very shortly.

The eggs, which are the most important feature clinically and symptomatically, are distinguished by a shell with a spike, usually terminal, sometimes lateral. The lateral spike is said to be characteristic of the worms in the rectum, owing to mechanical causes (as mentioned in Manson), but this is not so, as the cause of the lateral spike is due to more than one ovum attempting development in the germinal duct of the uterus of the female; all except one aborts, and this is distorted by the remnants of the others.

In the case under notice only ova with terminal spines were seen. The ova are killed by a 1-1000 solution of hydrochloric acid in one minute, and in very little longer time by more dilute solutions of the acid, thus disproving the old theory that infection occurs by drinking infested water.

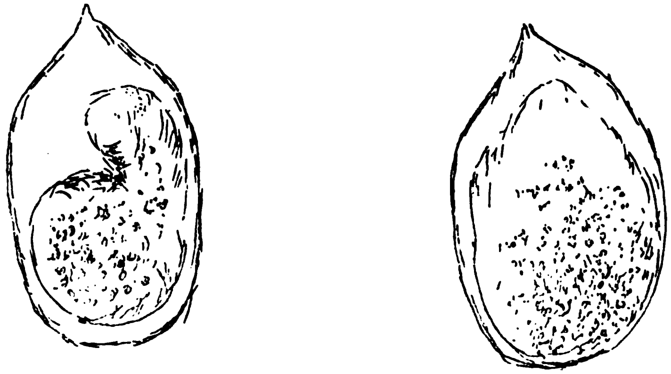
The life of the parent worm is long. In the case of an Egyptian medical student, ova were found in the urine for nine years after his removal from all possible sources of reinfection. The only animal yet discovered to be susceptible is the calf, and that not in any great degree.

The reason for the prevalence of bilharziosis in Egypt lies in the fact that those who are most subject to it work in gardens, fields, etc., and constantly stand about in pools of water. Their sanitary habits are so primitive that they usually micturate where they stand. Apart from such people and children who play about in pools, the disease is not so exceedingly common. The danger, therefore, of it becoming prevalent among a comparatively cleanly and well clad people is rather remote.

The lesions caused by the ova vary from a thickening of mucous membrane to huge pedunculated masses almost entirely occluding the lumen of the organ. It seems to bear a peculiar relation to carcinoma, as in many cases the ova are found in every part of cancerous masses.

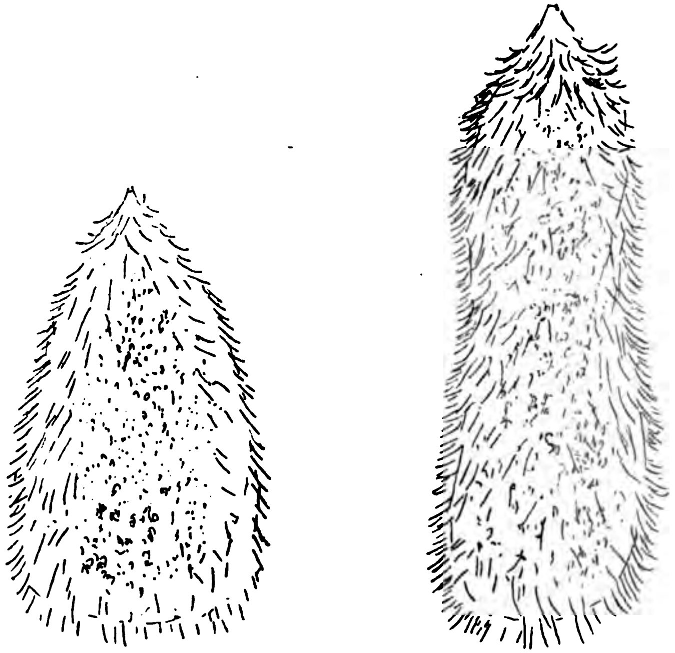
(Read before the New South Wales Branch of the British Medical Association.)

Cancer from X-rays.—It is reported that Mr. Clarence Dally, an American electricity and X-rays investigator, formerly assistant to Thomas Edison in his electrical laboratory and works, who had suffered for the past seven years from cancer in his hands, wrists and arms, as a result of his experiments with X-rays, has now succumbed.



NEARLY HATCHED. QUIESCENT.

OVA OF BILHARZIA HŒMATOBIA.



EMBRYOS OF BILHARZIA HŒMATOBIA.

TO ILLUSTRATE DR. H. C. HINDER'S PAPER, "A CASE OF BILHARZIA HŒMATOBIA."

[See p. 511.

THE PREVENTION OF POST-OPERATIVE INTESTINAL PARESIS BY SUBCUTANEOUS INJECTION OF ATROPINE AND ESERINE.

By William S. Byrne, M.D. (Dub.), M.R.C.P. (Lond.), Brisbane.

In the *American Journal of Obstetrics* for April, 1904, appeared a paper by Daniel H. Craig, M.D., in which is discussed the pathology and treatment of post-operative intestinal paresis, and as this is but a short paper giving my results, I am not going fully into the matter, but would strongly advise anyone interested in the subject to read the original article. Suffice it to say that I am personally extremely pleased with the results I have obtained, and look upon the subcutaneous injection of atropine and eserine, as suggested by Dr. Craig, as a valuable addition to the resources of the abdominal surgeon. All who do much work in the pelvis are much worried for two or three days after opening the abdomen until intestinal peristalsis has been re-established, and it is the usual experience that patients suffer more or less from wind pains and some distension, which, however, disappear with the first evacuation. But it is this first evacuation that gives us all the trouble, and before it is obtained the amount of magnes. sulphat., calomel, enemata, etc., used is large, and the suffering entailed on the patient is so great that any method of treatment that promises at least partial relief will be very welcome. Accordingly, I may be excused for taking up your time with notes of a few cases this evening. Shortly, the pathology of intestinal paresis after abdominal section may be stated as follows: The splanchnic nerves normally exhibit an inhibitory action over peristalsis, whilst Auerbach' and Meissners' plexuses, in the intestinal walls are the excitants, and are capable of independent reflex action, even when all communication with the central nervous system is cut off. Thus it appears that in the course of manipulations in the abdominal cavity the plexuses are paralysed and the splanchnics are irritated, with the result that peristalsis is at once brought to a standstill, and distension and accumulation of flatus is the result, and, in my opinion, also induces the vomiting which lasts after the effect of the anæsthetic has passed. I do not think that Dr. Craig claims that after using this method no patient will suffer from meteorism or that all will be benefited alike, but my patients who did not get morphia have suffered less wind pains, less vomiting, have been in much more comfort, and the peristaltic action of the intestine has been more quickly re-established since I have adopted the treatment.

I will mention eight consecutive sections with their results as far as peristalsis is concerned. The mode of using the drugs is the same in all—a few minutes previous to the patients being placed on the table; one two-hundredth of a grain of atropine is injected subcutaneously, and as soon as the operation is over and the patient is in bed, one-fortieth of a grain of salicylate of eserine is similarly used. In one of my cases no result was noticed, but in all the rest, at intervals varying from a half hour to 12 hours, peristalsis was restored, and rumblings of flatus were heard by the nurses in charge, sometimes slight, sometimes loud, and sometimes, as was well put by one of them, in a volley. In only one case was there an evacuation without extraneous help, but in none was there any great difficulty.

Case 1.—Mrs. G., a patient of Dr. S.; operation for pelvic abscess; many adhesions and a difficult operation. Half-an-hour after being put back to bed, rumbling heard; in four hours much louder rumblings; two hours later passed portion of enema, which had been given previous to operation, and a large amount of flatus; on the following morning without any further interference, five loose stools; no vomiting. This was rather interesting, as the nurses in charge, who had a large experience of abdominal work, had not been told what to expect, and one of them rang me up by telephone to know what was the matter, as such rumblings were quite foreign to her previous experience.

Case II —Mrs S., double oöphorectomy; no vomiting; no rumblings. This is the only case so far in which no result was obtained, as far as one could see; but it is worthy of note that no vomiting occurred.

Case III.—Mrs. C., ventri-suspension; no vomiting; frequent rumblings heard during night; free evacuation after enema next day.

Case IV.—Mrs. McL., abdominal section; large number of adhesions between uterus, ovaries, omentum and intestines freed; three hours after repeated rumblings experienced; free evacuation next day after enema.

Case V.—Miss T., ventri-suspension; four hours afterwards loud rumblings; large quantity of flatus passed; enema next day, followed by small evacuation, but large amount of flatus.

Case VI.—Miss S., section for ovarian tumour; slight rumblings after four hours; enema next day, followed by evacuation.

Case VII.—Miss H., retroversion with adhesions, result of pelvic inflammation; section. Nurse's report: "No vomiting; first rumble heard at 11.30 p.m. (about 14 hours after operation); an interval of 20 minutes, then a volley of rumbles, distinctly audible at a distance of several feet; gentle rumbles continued till 2 a.m.; between 6 a.m. and 6.15 a.m. patient avers she had fourteen rumbles." Free evacuation next day after 10 grains of pil. col. co. c. hyosyams.

Case VIII.—Mrs. I., section; large number of adhesions between bowel, omentum and both broad ligaments; a very long operation; vomited freely during day, but frequent rumblings heard; next morning at 8 a.m. large quantity of flatus passed and bowels freely opened at 11 a.m. after enema.

There were five other cases in which the treatment was employed, but unfortunately owing to excessive sensibility to pain morphia had to be injected, and in those cases the usual state of things occurred, namely, vomiting, constipation, flatulence, distension more or less, and the ordinary treatment of calomel, Maynes' sulphate enemata, etc., etc., and for three or four days there was the usual intense discomfort. The tabloids of eserine salicylate were made for me by Thomason, Chater and Co., of Brisbane; their only drawback being that they are rather difficult to dissolve in cold water.

I am glad to welcome any treatment which avoids the worry to patients entailed by the use of calomel, Epsom salts, repeated enemata, and all the trouble incidental to pouring nauseous drugs into an already irritable digestive tract, and I am sure that any of you who adopt this treatment will be gratified by the results obtained.

(Read before the Queensland Branch of the British Medical Association.

Women Doctors in Russia.—New statutes which have just been issued in Russia place women doctors on practically the same footing both with regard to education and practice as their male rivals. Ladies may now obtain diplomas, pursuing their studies for medical degrees in the universities of the country and in the Military Medical Academy. A characteristic point in the new law is that it limits the number of women medical students of the Hebrew faith to three per cent.

SOME NOTES AND CRITICISMS ON PHOSPHORISED MATERIA MEDICA.

By Cyril E. Corlette, M.D., Ch.M. (Syd.), D.P.H. (Camb.), Hon. Assistant Surgeon and Hon. Assistant Pathologist (Pathological Chemistry), Sydney Hospital.

COMPOUNDS containing phosphorus are much prescribed, and the preparations are used in obedience to the teaching that a special therapeutic virtue is associated with that element, and obtained when it is prescribed. To those who distinguish this virtue, my contribution assumes, in some sort, the form of an essay on the cheap and palatable prescribing of some phosphorised compounds. On the other hand, the comparisons which I have made available certainly expose the banality of some of our current medical drug therapy.

Speaking generally, we find that phosphorus is used in medicine in three forms. In the first it is employed in its active elementary state as yellow phosphorus, or substances which readily yield it, such as the phosphides. The hypophosphites belong also in some measure to this group rather than to others. This first, or yellow phosphorus group, will be left out of discussion here, as it seems to stand a good way apart from the rest. The second form consists of preparations of the familiar inorganic compounds in stable combination. The third form exhibits the element in phosphorised organic compounds. It will be convenient to consider these last ones first.

It is becoming the fashion to prescribe preparations of iron, phosphorus, and some other elements in forms derived from complex products of the animal or vegetable organism, in the hope that they may be more easily absorbed or more efficacious in action. These preparations are comparatively expensive, and some of them are apt to undergo bacterial decomposition, making them more or less inconvenient. However, I hope to show that those who wish to prescribe phosphorus in phosphorised organic combination can easily do so without recourse to the druggist, though one will need to remember that drugging, as such, has its own often important psychical effect, and if that element of treatment is to be supplied, it must be done concurrently by a placebo.

Organic compounds containing phosphorus are exemplified in the following:—(a) Glycero-phosphoric acid, a constituent of lecithin, a substance present in egg-yolk and in seeds, and also in brain matter; in the latter associated with protagon. (*b*) Nuclein is another important phosphorised compound. It is present in cell nuclei, and is therefore especially abundant in the glandular organs. It is also present in fairly large amount in brain matter. (*c*) Pseudo-nuclein, a constituent of the vitellin of egg-yolk, and present in eggs of all animals—fish-roe, for example. It is also present in seeds, and largely so in those of leguminous plants, where it is contained in a proteid body allied to casein, known as legumin. Above all, pseudo-nuclein is an important constituent of the casein of cows' milk, in which it forms the chief phosphorised product. (*d*) Phosphocarnic acid, or nucleon, found in muscle-substance and in milk, especially human milk.

We may now consider glycero-phosphoric acid a little further. It is a product which has been employed of late years by various physicians, especially in France, as an adjunct to the treatment of disease of a neurasthenic type, and it is now being energetically pushed by some manufacturing druggists. The usual dose is from 5 to 10 grains. As already mentioned, glycero-phosphoric acid is derived from a somewhat complex and unstable substance called lecithin, C_{44}, H_{90}, NPO_4. Lecithin embodies one molecule of glycero-phosphoric acid, two of stearic acid, and one of choline. It is largely present in the brain, where it is derived from protagon, and is also abundant in egg-yolk, which contains 10 per cent.

Now as to the potentialities of egg-yolk in this connection. The yolk in the egg of the domestic fowl varies in weight from about 14 gm. to about 18 gm. Assuming 15 gm. (half an ounce) as an average weight, we calculate from the molecular weights (lecithin 807, glycero-phosphoric acid 170, sodium glycero-phosphate 216, calcium glycero-phosphate 210) that a yolk of this size contains 23 grains (1·5 gm.) lecithin, equal to 5 grains (0·3 gm.) pure glycero-phosphoric acid, or 6 grains (0·4 gm.) sodium, calcium, or other glycero-phosphate. It therefore happens that in taking one egg-yolk a patient swallows the same amount of glycero-phosphate as is usually prescribed for one medicinal dose. It must be admitted, too, that egg-yolk can claim that it is also a food, for it contains 2·5 gm. to 3 gm. of proteid (the minimum daily supply of proteid necessary in health is 100 gm. and upwards), and the yolk furnishes about 60 calories of energy (the minimum daily need of calories is 2500 and upwards). If also the white of the egg be consumed, the patient receives a further 4·5 gm. of proteid and some 20 additional calories. If relative cost and relative convenience be compared, it must be conceded again that the advantage is decidedly on the side of the egg.

As already remarked, brain is also very rich in lecithin, and one might suppose that this, too, would be a promising source of glycero-phosphoric acid to the organism, but some experiments by G. Politis[1] cast doubt on the point. In a dog fed on brain matter he got the astonishing yield of 42 gm. fæces (dry weight) for every 100 gm. brain (dry weight) eaten. The experiments need to be multiplied and extended, but as they stand at present they certainly discourage much reliance on brain as an article of food, and perhaps as a source of phosphorus to the body. As for eggs, according to Carl Voit, 95 per cent. is absorbed, as against the 58 per cent. noted by Politis in the case of brain. This looks as if the glycero-phosphoric acid derived from the egg were better absorbed, but it is as well to mention that in considering metabolism there are many sources of fallacy to guard against, and I can speak from some amount of personal experience in this class of experimental work.

So much for glycero-phosphoric acid and the substances yielding it. The next compound to consider is nuclein, which contains 5 per cent. of its weight as phosphorus, but no convenient data exist by which quantitative calculations can be made, based on the amount of any particular foodstuff consumed. It may be remarked that nuclein is not very readily decomposed in the alimentary canal, and is possibly not very easily absorbed. But to an extent it is certain that absorption does occur, and it is known to produce an increase in the purins, or uric acid group of urinary constituents. This is held to indicate a strain on the excretory apparatus, and so it is not likely to be prescribed for long periods or in any quantity. But it is well to remember that it is a constituent of ordinary food. Some articles of the table contain an extra large amount of it. Such are sweetbreads, liver, and all richly cellular organs, of which the glands mentioned are examples.

We now come to pseudo-nuclein. This substance does not yield a member of the uric acid group ("purin group") on decomposition. As already mentioned, it is present together with lecithin in egg-yolk, and besides phosphorus it contains a certain amount of iron, and provides a store of that element for the hæmoglobin of the embryo chick. Its percentage amount in egg-yolk is not definitely ascertained. Our present consideration will, however, be chiefly devoted to pseudo-nuclein as an important constituent of the casein of cows' milk. The amount obtainable from cow casein varies much, but it may yield over 21 per cent.[2]

The quantity of phosphorus in casein-pseudo-nuclein also varies, but it may be as high as nearly 7 per cent. Cows' casein also contains a further amount of organically combined phosphorus not split off with the pseudo-nuclein. From 6 to 60 per cent. of the phosphorus in casein is associated with the pseudo-nuclein, the rest being combined in another form. Cows' milk contains, on the average, 3·02 per cent. casein. Casein, on the other hand, contains 0·85 per cent. phosphorus, whence it may easily be calculated that cows' milk contains 0·0256 per cent. phosphorus associated with its casein constituent. One pint of milk (568 cc.) therefore contains, in this form, 0·145 gm. (2·237 grains) phosphorus, equalling 0·332 gm. (5·12 grains) expressed as phosphoric anhydride, P_2O_5. But cows' milk contains much more phosphorus than that associated directly with the casein. Reckoning all the phosphorus present in milk as P_2O_5, Bunge finds the total in cows' milk to amount to 0·197 per cent.[3] This gives us 1·119 gm. (17·266 grains) in a pint. Subtracting the 0·332 gm. (5·12 grains) belonging to the casein, we get the figure for the inorganic phosphates as 0·787 gm. (12·146 grains) per pint, expressed as P_2O_5. The small fractions are shown merely because they appeared in the calculations.

So a person drinking one pint of milk takes a dose of organically combined phosphorus, chiefly as pseudo-nuclein, equivalent to a little more than 5 grains phosphoric anhydride, and, in addition, a dose of inorganic phosphates, chiefly of calcium and magnesium, equivalent to over 12 grains of the same, making a total of 17¼ grains, expressed as P_2O_5. It may be added, as in the case of egg, that he is also taking a food, one pint of milk containing 20 gm. proteid (need per diem 100 gm. and upwards), and furnishing in energy units a total of some 410 calories (need per diem 2500 and upwards).

Phosphocarnic acid, or nucleon, is the fourth important phosphorised organic compound to notice. That it is important is apparent from the observation of Siegfried, who finds that this substance accounts for 41·5 per cent. of the total phosphorus in human milk, though only for 6 per cent. in cows' milk[4]. K. Wittmack[5] gives the percentage of nucleon in human milk as 0·124 per cent., in cows' milk 0·056 per cent. Blumenthal[6] gives the percentage in cows' milk as 0·05, practically the same as Wittmack. Nucleon was discovered first by Siegfried[7] in muscle. Human muscle is said to contain from 0·1 to 0·2 per cent. The molecular composition of nucleon does not seem to be ascertained definitely enough to allow of a set of calculations like those I have put forward in connection with glycero-phosphoric acid and pseudo-nuclein, but readers will note that it is a constituent of the natural food of the human infant, and also of ordinary flesh food.

Inorganic compounds into which phosphorus enters still find a place in medical prescriptions, and that, apparently, with an idea that a portion of their therapeutic value (if any) is specifically due to the fact that they are phosphorus compounds. Since this is so, a little notice may be extended to one or two of these. There are several such preparations in more or less familiar use. Let us first take Syr. Calcii Lactophosph., which is an official pharmacopœial preparation, the dose of which is given as from ½ to 1 drachm. The syrup contains 4·6 per cent. of a 47·4 per cent. solution of phosphoric acid. We can easily calculate from this that Syr. Calc. Lactophosph. contains 2·18 per cent. P_2O_5, or 0·95 per cent., reckoned as elemental phosphorus. The sp. gr. is 1·3, and a drachm measure therefore weighs 70 grains, and contains 1·52 grains P_2O_5. A pint of milk contains a little over 12 grains inorganically combined phosphorus, reckoned as P_2O_5, or 1·50 grains in 2½ oz. So that in 2½ oz. milk we get the amount of P_2O_5 contained in the maximum pharmacopœial dose of the syrup. If the total phosphorus of milk be regarded, we find 17·26 grains to the pint, and nearly as much in 1½ oz. milk as in 1 drachm syrup. We might add that the syrup contains 1·28 per cent. combined calcium, and a drachm measure therefore contains about 0·8 grains. Cows' milk contains combined calcium equal to 0·141 per cent., and a pint therefore contains 12·3 grains. So every time we drink a pint of milk we take about fifteen times as much combined calcium as exists in a drachm of the syrup, and much of it is combined in a very similar form. At the same time we take about eleven and a half times as much phoshorous as exists in a drachm of the syrup. From all this we may infer that Syr. Calcii Lactophosph. B.P. is as devoid of specific virtue as bread pills or caramel and water.

Take Syr. Ferri Phosph. Co. (Parrish's Food) as another example. This contains the equivalent of 0·75 grains P_2O_5 in one fluid drachm. A pint of milk contains 12 grains and a drachm 0·075 grains inorganically combined P, reckoned as P_2O_5. Therefore 10 drachms or 1¼ oz. milk contain as much as one drachm of the syrup. Counting the total phosphorus of milk in the same way as above, we find 0·08 grains in one drachm, which makes 7 drachms milk, containing 0·75 gr. P_2O_5, yield exactly the same as a drachm of Parrish's Food, which is the ordinary maximum dose. We may conclude that the iron in the preparation is the only real medicinal element.

If the hypophosphites possess medicinal virtue, it is, as already indicated, probably of a kind mildly resembling that possessed by yellow phosphorus, and cannot well be compared with any phosphorus-containing compounds found in milk, eggs, or other foodstuffs, whether organically combined, or existing as inorganic phosphates. They are therefore not adapted for consideration within the limits of the present discussion.

REFERENCES.—(1) Zeitschr. f. Biol. Bd. xx, s. 193. (2) Von Moraczewski Zeitschr. f. Physiol., Chem., Bd. xx, s. 28. (3) Zeitschr. f. physiol. Chem., Bd. xiii., s. 899. Quoted by Schäfer, Textb. Physiol., vol. i, p. 131. (4) Sebelien, Jahresb. ü. d. Fortschr. d. Thier-Chem., Wiesbaden, Bd. xv. s. 184. Quoted by Schäfer, *loc. cit.*, p. 139. (5) Zeitschr. f. physiol. Chem., Bd. xxii., s. 567. Quoted by Schäfer *loc. cit*, p. 104. (6) Virch. Archiv. Bd. cxlvi, s. 65. Quoted by Schäfer *loc. cit.*, p. 104. (7) Du Bois-Reymond's Arch., Physiol. Abth., 1894, s. 401.

SEVERE GASTRITIS.

By E. Champion, M.B., Ch.B., Ballarat, Vic.

I HAVE called the case which I am about to report one of severe gastritis, but of the cause of the inflammation, with its fatal result, I am as much in the dark now as I was when treating the patient.

On March 5th, 1904, I was asked to see Mrs. R. J. She was 29 years old, and the previous evening had had a miscarriage at about the second month. Nothing had been taken to try and induce abortion.

The patient was a well-nourished person: there was well marked jaundice; the tongue was thickly coated and moist; there was some tenderness over the epigastric and right hypochondriac regions; the bowels had moved after medicine; vomiting was present, and it had been noticed that for two or three days previously the patient was a little out of sorts and had a funny colour. There was no tenderness over the lower part of the abdomen; the lochia was normal and the uterus appeared to be empty. In the absence of a history of ingestion of irritating food or drugs, I took the case to be one of catarrh of the stomach and duodenum with jaundice, and concluded that the miscarriage was secondary.

Patient was at first treated with salines, but as vomiting persisted she was put on bismuth. There was never any tenderness over uterus, the discharge was quite normal, and nothing was detected in the broad ligaments. Although the vomiting was partly checked by the bismuth, and the bowels moved every day, without diarrhœa, and the jaundice began to be less marked, there was no decided improvement.

On March 16th (11 days) the jaundice had disappeared, but the vomiting became more persistent; a herpetic rash appeared on upper lip and a macular eruption on the shoulders and arms; the bowels became constipated, the tongue to get dry and brown, and the mental condition became dull and apathetic. The rash gradually spread over the body, the vomiting became worse, and the bowels remained costive. It now appeared as if there might be some intestinal obstruction, and the rash was believed to be caused by absorption of toxic substances from the bowel. She was sent into hospital on March 19th. For the subsequent history and careful examination of urine, blood, and post-mortem specimens, I am greatly indebted to Dr. M. C. Lidwill.

On admission to hospital: Temperature 97·6, pulse 24, respiration 24. Was in a very dull mental state and not able to give any connected account of herself. Complained of weakness, nausea, thirst, and persistent vomiting. Tongue was dry, brown, and covered with sordes. There was a pink macular rash all over the body, becoming confluent at back of neck, over scapulæ and on extensor surfaces of arms, which disappeared on pressure; it was less marked on flexor surfaces of legs and extensor surfaces of forearms. Small of back and abdomen comparatively free from rash. There was slight itching. The abdomen was not distended, but there was resistance in the upper quadrant, especially on the right side. No diminution in liver dulness. No lead line on gums. The bowels acted after 5 grains calomel, and on March 21st and 23rd after simple enema. The vomiting persisted. On the 24th bowels acted four times. The patient became wildly delirious and died on the 26th, the temperature having been subnormal since admission.

On 23rd examination of urine was as follows:—Quantity, oz. 21 for 24 hours; sp. gr., 1015; reaction, alkaline; colour, light yellow and opaque; trace of albumen; no sugar; no leucin or tyrosin; no lead; bile salts present; bile pigment, faint trace; no acetone; very little indoxyl; urea 8·75 grains; sediment, triple phosphates and granular débris. Examination of blood.—Red corpuscles normal in shape; slight leucocytosis; nothing else abnormal.

The post-mortem examination was made seven hours after death, and the specimens taken at the time were afterwards carefully examined by Dr. Lidwill. Cadaveric rigidity very slight; no sign of any rash. Brain: Lower part of medulla and beginning of spinal cord were tough. Microscopically nothing abnormal detected, and the vessels free from disease. Lungs: Emphysema; air bubbles under the pleura in upper and anterior parts of lungs, spreading to anterior mediastinum, infiltrating the roots of lungs and spreading to lateral insertions of diaphragm and slightly to perinephritic connective tissue. Heart, small; left side systole; right side, diastole. No valvular disease. Muscle feels greasy. Stomach normal in size. Surface covered with thick tenacious mucus, beneath which were seen capillary ecchymoses and dilated capillaries. Pylorus thickened but not obstructed. Duodenum covered with similar mucus and dilated capillaries all over surface of mucous membrane. No inflammation about opening of duct. Small intestines in same condition as duodenum, but walls getting very thin towards cæcum. Large intestine thin, but normal. Uterus and tubes normal. Left ovary has a cyst on it about size of a bean, and contained some thick pus-like substance. This was the altered corpus luteum. Liver felt slightly greasy, was normal in size, but on microscopical examination was absolutely normal. Gall-bladder and ducts normal. Pancreas tough, but microscopically normal. Kidneys slightly enlarged and greasy; not tough; microscopically-cloudy swelling of convoluted tubules. Spleen enlarged and firm; microscopically tremendously engorged.

In addition to the above information, it was ascertained that deceased had only been in Ballarat for six months, and had lived in Broken Hill for four and a half years prior to that. Since her residence here her husband had been treated for chronic lead poisoning by Dr. Salmon.

The most prominent features in the case were, I think, jaundice, which on disappearing was succeeded by a macular rash, persistent and uncontrollable vomiting, and the dull mental state, culminating in delirium, which appeared along with the rash. Until four days before admission to hospital bowels acted every day and every second day after admission.

Acute yellow atrophy of liver was suspected during the case, but there was no diminution of liver dulness, the jaundice disappeared, and on post-mortem and microscopical examination the liver structure was normal. We could not obtain any history of ingestion of irritant drugs, and on careful examination lead and antimony were excluded. Could the condition have been caused by arsenic, and if so, how was it administered? or was it one of those cases of which Strumpell, speaking of acute gastric catarrh, states "that it is probable that toxic influences are exerted by the abnormal products of fermentation which takes place in the stomach? Litten has described several cases in which at first there were such symptoms as nausea, vomiting, flatulence, and a coated tongue, but which soon gave evidence by restlessness, headache, great muscular weakness, and a gradual lapse into somnolence of rather severe nervous disturbance in addition. The breath had a marked fruity odour, and on adding chloride of iron to the urine a strong reddish colour was developed, as in the so-called acetone reaction; so that it seems probable that an auto-intoxication had occurred somewhat resembling diabetic coma." In the present case there was no acetone, yet the progress was somewhat similar to Litten's cases.

(Read before the Ballarat Branch of the British Medical Association.)

NOTES ON A CASE OF GANGRENOUS PANCREATITIS.

By James T. Mitchell, M.D., Ballarat, Vic.

THE specimen which I show you this evening is of special interest, from the fact that it is only comparatively recently that diseases of the pancreas have been studied with anything like the care devoted to most other organs of the body. Until quite lately the literature was scanty and vague, while even now there remains much to be told, especially in points of clinical interest, which would guide the practitioner to a diagnosis as clear and unmistakeable as he is able to obtain in diseases of most of the other organs. I have to acknowledge my indebtedness to Dr. M. C. Lidwill, the resident medical officer, for the careful notes he kept of the case.

T. C., aged 44, labourer, was admitted to the Ballarat District Hospital on June 15th, 1904, under Dr. Champion. He was then well nourished, and looked his stated age, but his face had a " drawn " expression. There was a history of free use of alcohol. He laid upon his right side, with the knees slightly flexed. He complained of severe pain in the umbilical region and the right shoulder. This umbilical pain started six days before, and had passed off; but two days before admission the pain came on very severely, and had remained ever since. It amounted almost to agony. He gave a history of having suffered from occasional colicky pains after drinking during the hot weather. Otherwise he had been a strong, healthy, hearty man, and had never been ill or suffered any particular inconvenience. There was no lead line on his gums; the tongue was coated and moist. There had been persistent vomiting for the two days during which the pain had been present, and the vomited matter was green and " bilious." The bowels had not been open for two days. His pulse was wiry and quick—108 per minute. There was marked tenderness and rigidity of the abdomen, with impaired percussion resonance over the right epigastrium. Pressure greatly increased the pain.

June 18th (three days later).—Hiccough developed and gave much distress, while vomiting was as severe as before.

June 20th.—The vomiting was less frequent and severe, and had changed in character, being sometimes watery, with coffee grounds, sometimes slimy, with clots floating in it, sometimes quite black or black and red mixed.

June 22nd.—A tumour was detected in the epigastrium, the longitudinal axis of which was transverse. A consultation was held at which an exploratory laparotomy was advised, to which the patient firmly refused to submit, although the extreme gravity of the case was pointed out to him.

June 25th.—Hiccough was severe and vomiting was intermittent. The tumour was that day quite distinct and moved with respiration. It was seen not to fill the substernal notch, but lying transversely, its lower border reached nearly to the lower border of the ribs. It was considered to be posterior to the stomach. From this time to July 3 the tumour appeared and disappeared at irregular intervals. The disappearance was usually associated with vomiting, but this was not always clearly observed.

July 2nd.—The vomiting was only slight and at longer intervals. On that day the epigastric region was tympanitic, except for a small, dull area at the lower border of the left ribs. There was also a point of marked tenderness below and to the right of the umbilicus. The epigastrium was distended and prominent, with a " cushion-like feel." The prominence varied from time to time, and no liver dulness could be ascertained.

July 3rd.—The tumour had entirely disappeared, and from this date forward till death, nothing but a distended stomach could be found. The distension disappeared on vomiting or the eructation of gas. Scarcely 12 hours now passed without vomiting, while for the last three days of life considerable quantities of watery fluid, containing coffee grounds, were ejected, and the hiccough was persistent. The bowels had moved regularly throughout the illness, and no melæna was observed at any time. The patient wasted with extreme rapidity, and died on July 18th, 33 days after admission and 39 days from the onset of his symptoms.

The post-mortem examination showed the body to be emaciated. The *heart* and *lungs* were normal, as was also the appendix. The *liver* showed some recent perihepatitis on the upper surface. The *gall-bladder* was firmly adherent to all the surrounding parts, and a small abscess, containing one ounce of greenish pus, was between the liver, stomach, and gall-bladder. The stomach contained some fluid, with coffee grounds (blood) floating in it. The pylorus, duodenum, transverse colon, pancreas, and spleen were inextricably bound together, and the foramen of Winslow was occluded. The cavity thus formed by the lesser omentum was like an abscess cavity, with rough, shaggy, and eroded walls. It contained grumous bloodclot and thick slimy fluid of foul odour, and it communicated with the duodenum by a round, clean-punched hole, half-an-inch in diameter, in the posterior wall, and one inch below the pyloric orifice. There was no erosion of mucous membrane around the ulcer, the diameter of which was less on its mucous than on its peritoneal aspect. The wall of the duodenum was thickened and indurated in the neighbourhood of the ulcer. The spleen was softened and not materially altered in appearance. But the *pancreas* had suffered severely. Of the main portion of that organ, little but the capsule remained, the substance of the head and body of the gland having been broken up and discharged into the abscess cavity. What was left of the body of the pancreas was of a slate blue colour. The tail was fairly normal and but little injured.

The points of interest in the case are briefly these. The very short period of illness which preceded the discovery of the tumour in the epigastrium, and the variation in the size of the tumour from time to time. It is evident that the contents of the abscess cavity were passed at intervals through the perforation into the duodenum and regurgitated into the stomach, whence they were vomited.

There are two possible explanations of the case. It may be claimed that the primary trouble was an ulcer of the duodenum, which perforating, allowed the intestinal contents to escape into the lesser peritoneal cavity. These, setting up acute local peritonitis, may have resulted in the pancreatic inflammation. But, on looking at the character of the ulcer, one could not conceive of its having eroded from within the duodenum. There was complete absence of history of gastric disturbance till less than two weeks before the tumour was discovered, and acute perforating ulcer of the duodenum in a healthy man of 44 years would be unlikely. There is but little doubt that the pancreas was the original seat of the trouble. Probably at first hæmorrhagic pancreatitis occurred, followed quickly by gangrenous disorganisation of the gland, which, bursting, formed an abscess in the lesser omental cavity and perforated the duodenal wall, discharging its contents into the bowel.

(Read before the Ballarat Branch of the British Medical Association.)

HEART DISEASE AND PREGNANCY.

By Frank S. Hone, M.B., Ch.B., Semaphore, S.A.

The conditions that may be set up by the occurrence of pregnancy in women suffering from chronic valvular disease of the heart raise several points of practical interest that I have thought might be discussed with profit. I have, therefore, undertaken to bring forward some of these points for discussion in hopes that older members with wider practical knowledge may give us the result of their experiences.

The first point is as to the actual risk entailed by pregnancy and childbirth on a woman whose cardiac valves are diseased. Naturally enough the risk is far greater than in a woman with a sound heart. The extra strain on the circulation involved in any pregnancy is shown by the hypertrophy that is regularly produced in a normal heart. The call for this hypertrophy in a heart already hypertrophied to compensate for a faulty valve may be just sufficient to disturb the equilibrium that has been arrived at between valve and muscular wall. The risk of this is intensified by the more or less anæmic condition that constantly exists in the pregnant woman by fatty degeneration of heart muscle that is said always to be found in multiparæ, and finally by the muscular strain involved in the effort of parturition. Consequently very few will dissent from the almost unanimous warnings against marriage addressed to those subjects of heart disease by the various authors.

Fortunately, however, in my own peace of mind, I have found so far that women are not desperately anxious to consult their medical attendants as to whether their cardiac condition permits of marriage. One is more often confronted with the case at a later stage when pregnancy has already occurred. And while it may be wise when considering beforehand the chances of battle to look chiefly at the risks, it is not always the best or wisest plan for the practitioner to adopt when he is compelled to engage in the battle.

Now the views as to the risks of pregnancy in chronic cardiac affections have, I believe, been largely based on a paper by Dr. Angus McDonald (published in *Obstetric Journal*, 1877, and quoted by Playfair and others). He collected 28 cases, of which 17, or 60 per cent., were fatal. And he says the risk consists not only in the possible disturbance of equilibrium of the circulation, but also on the occurrence of fresh inflammatory lesions upon the already diseased valves. So far I have not seen or read of elsewhere the occurrence of the latter complication. And I think his figures greatly over-estimate the quantity of the former complication. I am relieved to find that Jardine, in his "Clinical Obstetrics," bears out this view, and states that " while a serious condition, it is not nearly so hopeless as McDonald and others have maintained." In the pages of his book, Jardine tabulates 14 cases (one complicated with pleuro-pneumonia) with only one fatality. I remember the first case that shook my faith in McDonald's dictum was an old dame of about 70 years whom I was attending with a most irregular heart and a marked presystolic and systolic mitial murmur. I found that over 35 years previously she had rheumatic fever and was warned by her medical man that her heart was badly affected, that she ought not to bear any more children. Yet she bore at least one child more and has lived for 40 years since, with apparently as bad a heart as one could wish to see. Soon after seeing this case I attended a primipara with marked aortic stenosis. I remember that it was a hot summer day, that the labour also was long and tedious, that finally I had to apply forceps under ether, but the patient showed no bad symptoms at all. Since then I have noticed the same thing on more than one occasion. During the last few months, since my attention has again been directed to the subject, I have examined a woman with marked mitial stenosis dating from a rheumatic affection some years back, who had passed safely through pregnancy and a trying labour about two years before I saw her. A few days later I saw a woman with definite aortic stenosis of some years' duration, who had safely borne two children during the past three or four years—one of them without medical attendance. Still more recently I attended in her fourth confinement a woman with mitral stenosis, who showed no bad symptoms, and had got through her previous three labours without a doctor.

I believe that if one makes a routine examination of the heart in all labour cases one will often find that there is unsuspected valvular mischief. It is these slighter cases where compensation is perfect, and unaffected by the strain of pregnancy, that go unrecorded, and consequently make collected cases, like McDonald's, represent too grave a view of the case. Yet these cases also have to be considered if one is to arrive at a correct estimate of any particular case.

It is not, therefore, sufficient to class the case as one of chronic valvular disease, and forthwith take a most gloomy view of the probable result if pregnancy has occurred. To rightly estimate the risk, and to rightly order one's procedure, other things than the mere presence or absence of a cardiac murmur of greater or less intensity have to be considered. The intensity of the murmur is probably the least important consideration. The importance in prognosis, even of the site of the murmur, is still a matter of debate. For while McDonald and Playfair, and Mitchell Bruce and others, including the reporters of two fatal cases in *British Medical Journal* (vol. 1., 1903), state that cases of mitial stenosis are undoubtedly the gravest, Jardine says, as a result of his experience, that he regards double aortic trouble as more to be feared.

Undoubtedly the most important points for prognosis are, as in all cases of chronic cardiac trouble, the state of the muscular wall, and the amount of enlargement of the heart present. A considerably enlarged heart will mean that there has already been a good deal of hypertrophy necessary to compensate for the valvular defect, and that probably there is already some dilatation present, both of which bring a breakdown nearer if there is to be still further strain on the heart. A flabby muscular wall has the same effect, and it is precisely the difficulty of accurately determining these two points that seems to me to cause the difficulty in prognosis. The way in which compensation has hitherto been maintained will probably be the best guide—any approach to failure of compensation apart from pregnancy makes a recurrence during pregnancy more than likely. Other considerations that have to be weighed are the nearness in point of time of the causal disease, the social condition of the patient, and the number of the pregnancy.

It may seem rather opposed to what I have been saying, but the next point I should like discussed is the frequency of a breakdown during pregnancy in hearts that appear to be free from valvular disease.

I remember some years back being called to a primipara at the end of the eighth month of pregnancy. She was in great distress, suffering from orthopnœa, cyanosis, harassing cough with free blood-stained sputum, œdematous feet and legs, rapid pulse, and other symptoms of cardiac dilatation and failure of compensation. Her heart was enlarged, with a strong blowing systolic murmur audible in the apical region and round to axilla; there were moist sounds all over the back of the lungs, but no temperature or inflammation. She looked very bad, and for three days and nights was only able to sit up in an armchair by the fire. She had never had rheumatic fever or any heart trouble to her knowledge, and had been practically well during her pregnancy till a few weeks previously her feet had begun to swell, and a few days previously she had noticed breathlessness coming on and gradually increasing. With cardiac tonics and other heart treatment she improved and lost all her cardiac symptoms before she was confined three weeks later. Her murmur had during the time diminished in intensity, though still audible. She had rather a tedious labour, and I finally had to give ether and apply forceps, but she showed no symptoms of distress and convalesced without symptoms. I had to see her a few weeks later for an abscess of the breast, which proved rather intractable. By this time the murmur and every other sign of cardiac mischief had disappeared. I have attended her in a subsequent confinement, in which she again had a difficult time and needed forceps, and I have examined her heart at intervals up to a few months back, but she has never had any symptoms or signs of heart affection since.

In another case a woman when about five months pregnant with the third child came to me with such shortness of breath that she could not walk more than a few steps. Her pulse was rapid, but on my first auscultation (made when sitting up) I could hear nothing wrong with the heart, and I thought the trouble probably due to an intensification of an anæmic condition, which I knew she had been suffering from a few months previously. Ordinary treatment with iron, etc., effected no improvement, and I then found that in the recumbent position one could hear what I at first took for a presystolic murmur, but which, from its subsequent disappearance with treatment, I suppose must have been a peculiarly reduplicated second sound. Directly she was put to bed and given cardiac tonics she began to improve, though previously neither rest nor other tonics had done any good She subsequently lost all her symptoms, had a rapid labour at full term, has since borne two children without any return of symptoms, and I have been able to find nothing wrong with the heart.

In this case the symptoms were not so marked, but in the first case there is no doubt about the dilatation of the heart. In both cases there was marked anæmia, and it is possible, just, as in chlorosis, one gets a dilated heart with an apical systolic murmur, that this was the cause of the trouble. If so, does it often occur?

The next question that arises is as to the correct treatment for failure of compensation during pregnancy. All are agreed as to the necessity for rest, cardiac tonics and other appropriate cardiac treatment. The debatable point seems to be whether to induce labour prematurely.

Some authorities go so far as to advise induction of labour in almost every case, irrespective of whether failure has occurred or not. This might be justifiable where one had seen the same patient with failure in a previous pregnancy, though, even here, it must be remembered that it does not follow that there will be the same trouble in a subsequent pregnancy. And there would be very strong reasons for it if there had been previous failure of compensation without any pregnancy. The trouble is that to be of any use in such cases the pregnancy should be terminated in the early months. But in practice one does not usually see these cases till after mid-term, before which time heart symptoms rarely arise. Under such circumstances, with symptoms of embarrassment already present, it seems to me that one is only adding to one's troubles by inducing labour. It is far better as a rule to try first to restore compensation and await events. In many such cases labour comes on prematurely of itself; others go even to full term and get through labour without trouble. If the patient were getting progressively worse, premature labour would probably give the only chance, though here again one must be prepared for a temporary exacerbation of symptoms by the very condition one has induced.

As far as the conduct of labour in such cases is concerned, practically all are agreed. The first stage should not be unduly prolonged; if symptoms of embarrassment exist, its termination should even be hastened by artificial dilatation. In the second stage, bearing down efforts should be discouraged, forceps applied early, and chloroform for the purpose is not contra-indicated. In the third stage, bleeding should be encouraged, rather than the reverse, as there seems to be a special tendency to dilatation of the right ventricle, owing to the retraction of the uterus forcing so much extra blood into the systemic circulation. It is here that the special danger in cases of mitial stenosis seems to lie, and Berry Hart and others advocate venesection if the natural hæmorrhage is insufficient. Fleming reports one such case where these symptoms came on suddenly so long as an hour after labour, and were only relieved by free bleeding from venesection.

(Read before the South Australian Branch of the British Medical Association.)

REVIEWS AND NOTICES OF BOOKS.

LECTURES ON DISEASES OF THE LUNGS AND HEART. By James Alexander Lindsay, M.A., M.D., F.R.C.P. (Lond.), Professor of Medicine, Queen's College, Belfast, etc. London: Baillière, Tindall and Cox. Sydney: L. Bruck. 1904. Price, 9s.

In this volume Professor Lindsay has included the lectures delivered to his students at Belfast during the last 15 years, and has added two introductory addresses which deal with the subjects of diagnosis in general, and the interpretation of the bearing of history in disease. The rest of the book is confined to the discussion of the various diseases of the thorax, the practical and clinical standpoints being kept in view throughout. In a volume of this kind one generally gets recorded the individual experience of the author, and this is, after all, much more valuable than a mere repetition of what has been written over and over again in the different text-books.

In the introductory chapter on Diagnosis, the author discusses two methods, which he terms the " serial " and the " direct." In the former the physician proceeds to systematically examine all the organs and systems of the body; in the latter, guided by the history and the symptoms complained of, he proceeds at once to examine the particular organ or system which he thinks is at fault, and thus arrives at a diagnosis. We entirely agree with Professor Lindsay that the " serial " method is *the* one which should be adopted by all students, and, we might say also, by all practitioners, for while it may be true that an experienced practitioner can make a rapid diagnosis by " direct " examination, in nine cases out of ten, something will be overlooked which has an important bearing on prognosis or treatment, unless every organ of the body be carefully examined. For example, a patient presents himself with the prominent symptoms of aortic disease, and the physician at once examines the heart, finds cardiac hypertrophy and an aortic regurgitant murmur, and diagnoses aortic disease. Quite correct, no doubt, but if no further examination be made, the physician may entirely overlook the possible existence of tabes dorsalis, with its suggestive etiology, and thus fail to attribute the aortic disease to its correct cause, viz., syphilis. We believe that increasing experience will teach any practitioner that it is fallacious to assume the absence of disease in any organ, and hence it is imperatively necessary, in order to make a complete diagnosis, that a complete examination of the patient should be made in every case, and we should relegate the " direct " method of diagnosis to those who are content with slipshod work and mere symptom treatment.

In the second lecture the author deals with the important subject of the family and personal history in rather a brief and cursory manner so far as important facts are concerned, but he illustrates his remarks with cases from his own experience, which are useful and instructive. He also deals well with the various pitfalls which lie in the path of the inexperienced practitioner in his inquiries into the patient's past history.

The succeeding lectures on the physical examination of the lungs and pleura are extremely good, and we are glad to note that Professor Lindsay is an advocate for the simplification of the terminology of physical signs. In many of the manuals of clinical diagnosis the subject is burdened with a large number of names for various physical signs, which only tend to hopelessly confuse the student, with no compensatory benefits. These lectures will well repay the student's and practitioner's attention. A large part of the subsequent lectures on lung disease is devoted to the subject of pulmonary phthisis. In the lecture on treatment of this disease the author discusses fully the question of climatic and sanatorium treatment, with all its advantages and drawbacks.

The second part of this volume is devoted to the subject of heart diseases. Here again the introductory lectures on the physical examination of the heart and blood-vessels are extremely good, and leave nothing to be desired by the student and practitioner. A useful lecture is one devoted to the study of cardiac symptoms; the different symptoms referable to the circulatory system are discussed, and the possible dependence of these symptoms on other organs and systems of the body is considered, thus making this a practical and concise summary of the whole subject. Treatment is also fully discussed, and many useful suggestions will be found in these pages.

We have no hesitation in describing this volume of clinical lectures as one of the best of modern works, and one which we heartily commend to our readers as a pleasantly written and instructive work. G.E.R.

LECTURES ON CLINICAL SURGERY. By H. C. Hinder, M.B., M.Ch. Sydney: Angus & Robertson, 1904. Price, 12s 6d.

Mr. Hinder is to be sincerely congratulated on his decision to publish this series of excellent clinical lectures. It is always gratifying to find Australian practitioners contributing worthily to professional literature, and especially when they write books which, like this, will be of permanent value.

With one exception these lectures deal with the surgery of the urinary organs, a subject which Mr. Hinder has made peculiarly his own, and in which he is recognised as an authority. It would perhaps have been better if the exception—a lecture on appendicitis—had been omitted from the present volume, its inclusion rather spoiling the work as an artistic whole. Literary art, however, is hardly the author's *forte*, and his style is sometimes more forcible than elegant. Clinical lectures are intentionally colloquial, but many classical examples show that they may also be models of composition and style.

The matter of these lectures is most excellent, and the views expressed cannot be too widely known and adopted. The first and second lectures deal with the diagnosis of urinary diseases, and the use of the cystoscope. They are eminently practical, and contain many valuable hints. The succeeding lectures discuss the clinical and surgical aspects of various urinary disorders—ulcer of the bladder, stricture, hypertrophy of the prostate, suppression of urine, and floating kidney. A very suggestive lecture is on conservatism in renal surgery. One of the most interesting of the series is that on ulcer of the bladder, which is freely illustrated with excellent coloured plates. Simple ulcer of the bladder is probably often overlooked, but it may be doubted if it is as common as Mr. Hinder apparently believes. The lectures on prostatic hypertrophy are up-to-date and thoroughly sound in teaching. Mr. Hinder says: "I should like to impress upon you what a serious step an old man takes in introducing his bladder to catheterism. The risk, and I do not say this thoughtlessly, is far greater than if he submitted to an operation at the hands of one who was conversant with this kind of work." . . . "In most cases I am an advocate of operative treatment for prostatic hypertrophy, from the firm conviction that early operative treatment, before the kidneys have become disorganised, is the treatment which will most surely prolong the lives of our old and elderly men. It must not for one moment be imagined that complete removal of the prostate is the operation of the future applicable for all cases." "The cases best suited for the Bottini operation are the early cases where increase of size is not marked. It has been used in all varieties of prostatic hypertrophy, but this is a mistake." Our own experience makes us completely in accord with these opinions.

Mr. Hinder rather exaggerates the importance of congenital conditions in causing appendicitis, and we cannot agree with him that "the argument that foreign bodies occasion appendicitis is a fallacious one." We have seen undoubted cases where foreign bodies, as pins, shot, etc., have caused acute attacks of appendicitis. Mr. Hinder's views as to treatment are based on common sense and are eminently sound.

G.A.S.

LECTURES ON CLINICAL PSYCHIATRY. By Dr. Emil Kraepelin. Revised and edited by Thos. Johnstone, M.D., M.R.C.P. London: Baillière, Tindall and Cox. Sydney: L. Bruck. 1904. Price, 10s 6d net.

Dr. Kraepelin's name being one to conjure with in matters relating to psychological medicine, it is not remarkable that in his "Lectures on Clinical Psychiatry" we have a work in many respects unique. Certainly it has no counterpart in any English author, excepting only Dr. Clouston's well-known and original "Clinical Lectures on Mental Diseases," which, by the way, has just and deservedly reached a sixth edition. The work under review is very suggestive, and the cases are so well chosen and faithfully pourtrayed as to form complete clinical pictures from which any departures may be readily recognised. Insanity, as seen in the author's clinic, differs in no important particulars from that observed in English-speaking countries, such as our own, and as diagnosis is one of the strong points of the book, its worldwide usefulness is apparent. This book accentuates the position, too readily overlooked, that insanity should be seen. It is essentially a clinical subject, and as there is probably no subject in a student's career so difficult to grasp as mental medicine, Dr. Kraepelin's lectures, in the absence of direct clinical opportunities, will be found useful not only to every student, but to every practitioner of medicine. If there be a defect it is in the direction of paucity as regards treatment, and it is evident that the Munich Professor believes in the main that the mentally afflicted are best cared for in what Esquirol described as "that instrument of cure," a hospital for the insane.

C.R.

MANUAL OF PRACTICAL OPHTHALMOLOGY. By George A. Berry, M.B., F.R.C.S. (Edin.), Senior Ophthalmic Surgeon, Royal Infirmary, Edinburgh; Lecturer on Ophthalmology, University of Edinburgh, etc., etc. Edinburgh and London: Young J. Pentland. 1904.

The reader of this book will not fail to observe that the author is faced by the necessity for apologising for this addition to the already numerous smaller works on the subject. He claims justification on the ground that "an adequate appreciation of the nature and treatment of even the commoner forms of eye disease is far from being general," and that it "gives expression to his individual experience as regards diagnosis and treatment, and is both short and eminently practical."

The author has succeeded in his aim, and we are glad to welcome the experiences and opinions of so sound and cultivated an ophthalmologist as Mr. Berry—even in so short and condensed a form. The book is well balanced, the various subjects being accorded the space and notice due to their relative importance. It is well written, well printed, and liberally illustrated. The chapter on Foreign Bodies in the Eye is particularly good, and so is that on Sympathetic Affections, though we note in the latter the omission of optic neuritis as an occasional early sign of sympathetic mischief. We think, also, that most operators prefer to have the single light above and to the front, rather than coming "from one side alone." These, however, are trifles, and the book can be strongly recommended as a manual to students and general practitioners.

F.A.P.

ADENOIDS. By Wyatt Wingrave, M.D. Medical Monograph Series, No. 9. Edited by David Walsh, M.D. London: Baillière, Tindall & Cox. Sydney: L. Bruck. Price, 2s 6d net.

Although there is nothing particularly new to be said about adenoids, the little work before us is interesting as setting forth the views and personal experience of a member of the staff of one of the principal special hospitals of London—that of the Central London Throat and Ear Hospital in Gray's Inn Road. The chapters on the difficulties and complications of the operation for the removal of adenoids, post-operative treatment and after care are well worthy of perusal, as is also that on recurrence. The chapter on anæsthetics is written by Mr. W. Hotten George, senior anæsthetist to the above named hospital, in which are discussed the merits of the various drugs used for the purpose, including those of quite recent introduction. The monograph concludes with some carefully selected formulæ, amongst which a prescription, combining iodine with tannic acid, with a view to diminishing the irritant effect of the former drug when administered internally in large doses, strikes us as being of special value.

G.T.H.

THE AUSTRALASIAN
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NOTIFICATION OF PULMONARY TUBERCULOSIS.

THE Health Committee of the Sydney Municipal Council have recently had under consideration some new by-laws in which they propose to make pulmonary and laryngeal tuberculosis a compulsory notifiable disease. These have not yet received the confirmation of the City Council, and in the meantime certain steps have been taken by the medical profession which will strengthen the hands of the City Health authorities in their endeavours to secure the passage of these by-laws and so diminish the mortality from tuberculosis.

The principle of compulsory notification of infectious diseases has worked well in connection with the specific ailments of this nature, and for some years past the same procedure as regards pulmonary tuberculosis has been adopted in some parts of Europe, America, and Australia. In New South Wales, however, up to the present time the only organised effort in the way of notification of this disease has been an endeavour to encourage voluntary notification of the occurrence of either a death from pulmonary tuberculosis or the recent residence of a patient suffering from this disease in any particular house. On receipt of this notice the City Health officials offer to disinfect thoroughly the room or dwelling recently occupied by the sufferer, and in the large majority of cases this action has been welcomed by the owner or tenant of the house. There is no doubt, as is seen from Dr. ARMSTRONG's last annual report, that these measures have already borne good fruit in diminishing the mortality from this disease. Voluntary notification, however, is inadequate to meet the necessities of the situation. To check the spread of tuberculosis it is essential that the general public, and particularly those who are suffering from this disease, should be educated as to the means to be adopted to prevent them spreading the disease and also as to the mode of life they should adopt. But this education can only be effected if the authorities know where these patients are to be found; and if notification of the whereabouts of patients suffering from this disease be merely voluntary, it is obvious that only a small proportion of cases would come under official cognisance. Moreover, voluntary notification could be rightly regarded as a breach of professional confidence, and a practitioner who, in his zeal for the public good, notified to the health authorities the existence of a case of pulmonary tuberculosis among his patients, might find himself involved in an action at law for heavy damages.

There is no doubt that strong opposition will be offered to this measure, as there has been in the past to every new method of combating disease when first introduced, but we cannot see that any valid objection can be raised to these proposed new by-laws in so far at any rate as they deal with the compulsory notification of pulmonary tuberculosis. Following the practice of other countries we have for some years past insisted upon the notification and segregation of persons suffering from leprosy, a disease which is, of course, contagious, but under what particular conditions is not clearly known at present. We know that pulmonary tuberculosis is disseminated mainly by the sputum, and surely there is much greater reason for taking such steps as shall prevent the possibility of the spread of the disease by the filthy habit of indiscriminate expectoration and by insanitary conditions of the dwelling-houses, than there is for the compulsory isolation of lepers, although the latter is an important and necessary regulation in the interests of the public health.

It is necessary, however, to bear in mind that the proposed compulsory notification will not deprive the unfortunate patient of his perfect liberty. No patient will be taken from his home or placed in any institution against his own wishes, the sole object of the notification being, as we have said, to benefit the patient himself and to prevent his being a menace to the health of his relatives and friends.

THE COMPTROLLER OF CUSTOMS AND THE MEDICAL PROFESSION.

We have hitherto been under the impression that authoritative pronouncement upon the corporal and mental health of individuals of the human species was peculiarly the function of the medical profession. We have also supposed that the opinion of a medical man would afford the only acceptable guarantee of physical fitness in the case of officials whose responsibilities include charge of the lives and welfare of members of the community. Indeed, we have been possessed of the idea that these views were beyond the range of dispute, the more emphatically so since we have had recently a serious shipping catastrophe to point the moral and adorn the tale. It seems, however, that they may be regarded simply as examples of benighted and arrogant fatuity. If the proceedings of the Navigation Commission have been rightly reported to us, the learned Comptroller-General of Commonwealth Customs (Dr. H. N. P. Wollaston, LL.D.) holds that the safety of the travelling public would be sufficiently safeguarded if shipmasters were "examined in a cursory way" by Superintendents of Customs. By implication the superintendents possess by intuition, or achieve "in a cursory way," that store of knowledge which we poor medicos acquire only after years of patient effort and much wear and tear of nervous tissue.

Further, although it has appeared to us that the recent conference of the principal health authorities of the various States was a very proper preliminary to the establishment of Commonwealth quarantine, and that the official positions and practical experience of the delegates entitled their advice to serious consideration, we seem, according to the same authority, to have been again labouring under a delusion. For it appears from the evidence given by him before the same Commission, that under the sway of the Comptroller, with his Customs and Navigation officials in every harbour, there would be no need for a central health authority nor for medical port health officers. Oh, shade of Æsculapius! are thy disciples as superfluous as this? Is their boasted art so vain a thing that its application can be safely entrusted to untutored tide waiters? Or, can we contemplate a dreadful alternative: dare we question the infallibility of the administrator of the exquisitely frictionless Commonwealth Customs Department? Has he on this occasion vented his views "in a cursory way," or has association with smuggled spirits turned his acute mind towards emulation of the Gilbertian character immortalised in "The Mikado"? Courtesy forbids precise utterance in this place of the adage referring to angels and another class of persons, but we may in all charity recommend for the Comptroller's consideration the saw which runs, *Ne sutor ultra crepidam.*

THE MONTH.

The New South Wales Government Asylums.

In accordance with a request by the late Chief Secretary, Mr. Perry, Sir Normand MacLaurin has inspected the Government asylums with a view of reporting what should be done to improve the accommodation. When the Old Age Pension Bill was before the Legislative Assembly, members were told that the passage of this bill would practically insure the closing of these benevolent institutions, and thus effect a large saving in the annual vote for charitable institutions. From the report furnished by Sir Normand MacLaurin it would appear that, so far from there being any prospect of the asylums being closed, there is every appearance of there being a necessity for an extension of the existing accommodation, as this is already overtaxed. This is the more extraordinary in view of the fact that the charitable vote has not been decreased and the old age pensions are costing the country over £500,000 per annum. It is obvious that the result expected has not been attained, and it would be well if the Government went a step further and inquired why it has not been attained. If all accounts be true, it would seem that the old age pensions are much abused, and if this large sum of money is being paid away annually, in addition to all the money expended in the maintenance of the destitute asylums, there must be a serious leakage in the expenditure somewhere. We hope that Mr. Hogue, who has the matter in hand and who intends to make some recommendation to Sir Normand MacLaurin's report to the Cabinet, will be able to deal with the matter in such a way that this large annual expenditure shall be curtailed.

Infantile Mortality in Victoria.

A deputation from the Victorian Board of Health recently waited upon the Minister of Health, Mr. Cameron, to invite his attention to the results of the working of the Infant Life Protection Act in that State. It appeared that the mortality among infants during the past three years had been close on 14 per cent. The records of the inquests—which were held in all cases of death—were far from conveying a favourable impression as to the conditions under which the infants were kept. It was clear that the Victorian Infant Life Protection Act or its administration was at fault. The Society for the Prevention of Cruelty to and Neglect of Children some years ago investigated the matter, and made certain recommendations, which were embodied in a bill. This bill actually passed the Legislative Council five years ago. It provided for the transfer of the administration of the Act to the Neglected Children's Department. It abolished the payment of lump sums to foster-mothers. It forbade the nursing of more than three boarded-out infants by any registered foster-mother, and at the same time it abolished the need for an inquest if the coroner was satisfied on medical evidence as to the cause of death. The numerous parties in the metropolis concerned in the protection of infant life were agreed as to the advisability of amending the law in these and other directions, as set out in the amending bill. The board accordingly asked the Minister's consideration of the bill, with a view to reviving it, or if that course were not followed, to have official inquiry made as to the cause of what appeared to be exceptional mortality among the boarded-out infants of the State. The Minister replied that he was in favour of the points mentioned, and would see how far he could meet the board in their request.

Organised Charity.

A somewhat novel method of securing regular support to the charitable institutions in Queensland has recentlyy been inaugurated in one of the departments of the Civil Service. At a meeting of the staff of the Lands Department, the Under-Secretary (Mr. W. J. Scott) being in the chair, a report was presented by a committee which had been appointed at a previous meeting, recommending a scale of contributions, which was estimated to produce £50 per annum, and to start on November 1st. The scale is roughly based on ½d in the pound on salaries up to £199, and ¾d in the pound on salaries over that amount. The fund is entirely voluntary and less than the amount suggested may be subscribed. Some 87 officers signified their intention to subscribe in accordance with these suggestions. Hitherto subscription lists have been received in the department on account of various charities, but as several sometimes come together, it has been found difficult to do justice to all. These lists, now that the fund has been started, will no longer be received, and canvassers will also be excluded from the offices. The scheme of distribution adopted was as follows:—65 per cent. to the hospitals (General, Lady Lamington, the Lady Bowen, and Children's), on the Burdett basis, or bed system; 10 per cent. to the Ambulance Brigade; 10 per cent. to the Blind and Deaf and Dumb Institution; 5 per cent. to the Society for the Prevention of Cruelty; while 10 per cent. is to be withheld for distribution by the committee in any urgent cases that may arise.

National Association for the Prevention of Consumption.

At a meeting of the New South Wales branch of the National Association for the Prevention of Consumption held at the Town Hall, Dr. Sydney Jones presiding, the chairman explained that a communication had been received from London intimating that it had been unanimously decided to grant the Sydney society affiliation with the parent association. The time had, therefore, arrived when active steps should be taken in connection with the matter. After some discussion it was decided that the ordinary subscription be 5s per annum, and that a donation of £5 5s constitute life membership. It was unanimously agreed that the methods to be adopted by the branch in carrying out its objects should be as follows:—1. The education of public opinion and the stimulation of individual initiative by means of (*a*) the distribution of pamphlets and leaflets setting forth in plain language the results of scientific investigation on the modes of diffusion of tubercular disease and the proper measures to be taken for its prevention; (*b*) public lectures by persons approved by the council of this branch, addresses at congresses and other public gatherings; (*c*) co-operation with other societies or bodies having for their object the promotion of public health; (*d*) the co-operation of the public press; (*e*) the promotion of the establishment of open-air sanatoria and special hospitals for tubercular patients. 2. The influence of Parliamentary, municipal, and other public authorities on matters relating to the prevention of tuberculosis. 3. The establishment of sub-branches throughout the State. It was resolved that his Excellency the Governor-General be asked to become patron and his Excellency the State Governor to accept the presidency of the society. Other officers were appointed as follows:—Vice-presidents, the Lord Mayor, the Chief Justice, Sir James Fairfax, Sir Arthur Renwick, Sir James Graham, Colonel J. H. Goodlet, Dr. Ashburton Thompson, and Dr. Sydney Jones; hon secretary, Dr. G. L. O'Neill; hon. treasurer, Mr. F. Grimley. Council: Drs. W. G. Armstrong, J. B. Nash. C. Maher, Faithfull, Fairfax, Gill, Camac Wilkinson, Hankins, Stacy, Windeyer, C. Bowker, Dixson, Crago, S. Gillies, Purser. Messrs. H. Levy, L. Dobbin.

St. John Ambulance Association.

At the fourteenth annual meeting of the St. John Ambulance Association held last month the report presented stated that 30 classes for the instruction of first aid and home-nursing, followed by an examination, had been held at places embracing the city and suburbs of Sydney, towns in New South Wales, British New Guinea, and Fiji. The number of those who attended the course of instruction was 656, of whom 454 obtained certificates and 19 qualified for the medallion. In order to extend the usefulness of the association by facilitating the formation of classes and bringing its operations up to date, the council had sanctioned the revision of the rules and by-laws by the executive committee. The committee were pleased at being able to announce the amalgamation of the Civil Ambulance and Transport Brigade with the St. John Ambulance Association. The expedience of having all the police instructed in first aid had so impressed itself upon the minds of the committee that the Inspector-General had been asked for the formation of further classes. The Inspector-General was warmly in accord with the wishes of the deputation, and as a result of his appeal to the men a large city class was now being conducted at the Central Police Court buildings. The whole of the members of the fire brigades attended the classes formed. Frequent inquiries had of late been made by Public School Teachers' Associations as to the formation of first aid classes, several of which were now sanctioned and lecturers appointed. The balance-sheet showed that the receipts for the year were £269, and the expenditure £260, which left a balance of £9.

The annual meeting of the Sydney and Suburban Provident Medical Association will be held at 121 Bathurst-street, on Tuesday, 25th October, at 8.30 p.m. Business: Election of office-bearers for the ensuing year; to be followed at 9 p.m. by a meeting of the medical profession to receive the report of the working of the Association during the past year. A. Acland O'Hara, Hon. Secretary.

BRITISH MEDICAL ASSOCIATION NEWS.

PROCEEDINGS OF AUSTRALASIAN BRANCHES.

New South Wales.

THE regular monthly meeting of the New South Wales Branch was held at the Royal Society's Room on September 30th, 1904. The President, Dr. A. MacCormick, in the chair. There were 40 members present.

The PRESIDENT announced the election of the following members:—Drs. R. R. P. S. Bowker, Stroud; F. S. Tange, Mosman; T. K. Osborne, England; G. B. Thomas, Ashfield; and the nomination of Dr. P. L. Hipsley, Glebe Hospital.

Dr. CHAS. MACLAURIN apologised for his absence from the last meeting when the paper placed on the business sheet in his name came on for reading. He explained that he had been summoned to a case and could not communicate with the meeting.

Dr. SINCLAIR GILLIES showed a case of rudimentary development of the clavicles:—D.C., *æt.* four months, is the third child. Parents are healthy. The eldest child, *æt.* three years, is healthy and normal. The second died at eight months from gastro-enteritis. Fourteen months after birth of second child, D.C. was born after ten months amenorrhœa, the mother believing herself to have gone a month over time. There is no history of syphilis or miscarriage. At birth the child was said to be plump and healthy, but to have a soft head and also to have snuffles. When first seen at one month old she was much wasted, suffering from snuffles and much recession of the lower ribs on breathing, producing well marked pigeon-chest. There was no sign of skin eruption, nor history of it. The ribs were abnormally soft, and the ossification of the cranial bones very deficient. The vault of the skull felt like a parchment bag with areas of ossification the size of half-a-crown representing the parietals. The clavicles were absent, being represented by a short projection on each side of the sternum about half-an-inch long and as thick as a knitting needle. There was no other sign of the existence of clavicles. The acromial processes of the scapulæ were distinct. The nails barely reached the ends of the fingers. The child was breast fed. During the three months it was under observation the rudiments of the clavicles increased slightly in length, but the child wasted still further, though it took the breast well and suffered from no apparent gastric disturbance. In view of the fact that ossification begins in the clavicle in the sixth week of intra-uterine life, and is usually well advanced at birth, the case seems worthy of record. (The child died a few days later, but unfortunately no post-mortem could be obtained.)

Dr. H. CRITCHLEY HINDER read some notes on a case of Bilharzia Hæmatobia, patient being in attendance. (See page 511.)

Dr. SINCLAIR GILLIES moved that a special general meeting be held on October 14th for the purpose of discussing the resolutions with reference to the notification of cases of pulmonary tuberculosis. Seconded by Dr. MacLaurin.—Carried.

Dr. TIDSWELL, before reading his paper, observed that that was the first occasion on which Dr. G. T. Hankins, the Hon. Secretary, had attended a meeting since his return from a trip to Europe, and members should be afforded an opportunity of publicly welcoming him home. To this the members very cordially responded. He then read notes on a case of Malignant Pustule. (See page 493.)

Dr. WORRALL read a paper on "Deciduoma Malignum," and Dr. Windeyer some bacteriological notes on the same. (See page 500.)

Dr. SYDNEY JAMIESON, referring to Dr. Worrall's paper, wished to point out that this was by no means the first case of deciduoma malignum reported in Australia. Some time ago two cases were recorded at one of the meetings of the Adelaide Branch of the British Medical Association. He himself had also come across a very interesting example of the disease, the details of which he had communicated at a meeting of the Pathological Club. The case in question came under his notice through his work in connection with the Coroner's Court. A young woman, in the midst of apparently good health, was suddenly seized with severe headache. Dr. Gwynne Hughes was called in, and having prescribed left. For a short time the girl seemed somewhat better and resumed her work (that of a domestic servant), but about four or five hours subsequently the pain returned, and she died quite suddenly. Post-mortem, a huge hæmorrhagic growth of the right occipital lobe was found, together with growths of a similar nature in both lungs and in the left ovary. No growth was found in the uterus, notwithstanding that very careful search was made. The growths showed the typical structure of deciduoma malignum, and further enquiry elicited the fact that some months prior to death the girl had had an abortion, but there was no evidence of this having been an hydatidiform mole.

Dr. GEORGE ARMSTRONG thought that Drs. Worrall and Windeyer had not laid sufficient stress on the difficulties the pathologist had in advising the surgeon in regard to the correct treatment of patients suffering from hydatidiform or vesicular mole. A case had recently been reported in which a vaginal tumour was removed showing typical syncytioma, and in which curettement of the uterus proved it to contain typical syncytial masses in the muscular coat of the organ, which had been perforated during curettement. The patient was advised to have the uterus removed, but refused; she was seen three years later and had a normal labour; other cases had been reported in which vaginal metastasis had not been completely removed, and yet the patients recovered. He had curetted a patient at the Sydney Hospital in December, 1903, for hæmorrhage after expulsion of a hydatidiform mole; the scrapings from the uterus were examined by the pathologist, who reported that the scrapings showed " invasion of adeno-carcinoma." The patient was advised to have the uterus removed, but she refused to have any further operation. He had examined the patient on the 13th inst. and found the uterus and appendages normal. The patient said that she felt very well and had increased in weight from 8 stone 5 lb. to 13 stone 2 lb. He recognised the possibility of a return of this patient's trouble, but so far she had progressed satisfactorily and proved the difficulty of giving a dogmatic opinion as to the prognosis in this class of case.

In reply to Dr. JAMIESON, Dr. WORRALL said he had evidently been mistaken in thinking this was the first recorded case of deciduoma malignum. The explanation of the case where the uterus was normal while there were metastases in distant organs probably was that villi while yet normal were carried by the blood to various parts and there underwent malignant change. Dr. Armstrong's case was very interesting. In the discussion on Dr. Teacher's paper one or two cases were referred to where curettage had *apparently* resulted in cure, but further evidence on this point was necessary.

Dr. F. A. Bennet congratulated Dr. Tidswell on the excellent chain of evidence of malignant pustule demonstrated by his microscopes. It left nothing to be desired. The sudden subsidence of symptoms on removal of focus of infection argued that excision and not antiseptic injections was the correct treatment. In a country like Australia, teeming with horses, cattle and sheep, the subject of anthrax was one of the utmost importance, and what chiefly concerned the majority of practitioners was its clinical diagnosis, since the rapidity of its course and severity of its symptoms brooked no delay in treatment. A poisoned wound or facial carbuncle might be mistaken for the second stage of malignant pustule, but the slower evolution of both and the crateriform perforation of the latter would aid the diagnosis. In the absence of reliable history, Dr. Bennet believed that an extra-genital chancre might occasionally cause confusion, and instanced a case of a young man who appeared at the Sydney Hospital with a lesion on the side of his nose, inflamed, with indurated base and border. The patient explained that he worked amongst wool and hides, which naturally brought up the question of malignant pustule to the surgeon who first saw him. The diagnosis, however, of extragenital chancre was ultimately made, notwithstanding the protestations of the patient against such a possibility. The diagnosis was correct too, for soon the usual secondary manifestations appeared, which set all doubt at rest. Later the patient traced the origin of his trouble to an ointment which had been applied by his brother to an accidental abrasion on patient's nose, which ointment at this time was being used by the brother on a primary syphilitic sore contracted in the usual fashion and situated in the usual place.

Dr. R. Steer Bowker said, with regard to anthrax, the *Munchener Medicinische Wochenschrift* of April 7th, 1903, publishes an article in which Feduschmidt recommended excision. He reports three cases, all on the face; there was an immediate fall in temperature, and the patients were practically well in two or three days. He recommended excision even if the glands are already involved, as in any case a great number of virulent bacilli are removed. Stadles reports some cases of which two died treated by the expectant plan, but at the University of Sienna out of 23 cases treated by Sclaro's serum only one died, and as he had cirrhosis of the liver, was an alcoholic, had also malaria and syphilis, and the necropsy showed nephritis and a hæmorrhage into the cerebrum, death could scarcely be said to be due to the infection, so that by this means all the 22 cases were cured. He thought the Board of Health should procure this serum and keep some fresh in stock for use by practitioners in a country so liable to this disease.

Dr. J. D. Leahy had heard of several cases of anthrax infection in human beings in New Zealand, the original source of infection being bonedust used as manure for fields. He did not think that it was quite proven that the fly was the carrier of infection in the case under discussion. The cause of the constitutional symptoms in malignant pustule was certainly very obscure, and it was difficult to demonstrate the truth of the theory of secondary products mentioned by Dr. Tidswell in his very able report of this case.

South Australia.

The monthly meeting was held at the University at 8 p.m. on Thursday, September 29th, 1904. Present: Dr. C. W. Hamilton (president), in the chair, and 28 other members.

Minutes of previous meeting were taken as read and signed.

Dr. Lendon showed a single lady, *æt.* 33, whose right breast he amputated for scirrhus in November, 1902; a year later a supraclavicular gland had enlarged and was removed, and on the same occasion a lump in the left breast was cut into, but sewn up again, as it appeared to be only a cyst; in May, 1904, a portion of the scar near the manubrium sterni had ulcerated, but under the influence of the X-rays it healed up. By this time there was obvious cancer of the left breast, with supraclavicular as well as axillary glands to be felt, and further recurrence above the clavicle on the right side. The case being now considered inoperable, removal of the ovaries was suggested, but the suggestion was not entertained until the end of June, when abdominal pain induced the patient to consent to this *dernier resort*. Both ovaries were found on removal to be cancerous, one being as large as a tennis ball. The operation was followed by immediate relief; now, three months later, the enlarged glands cannot be felt, and the lump in the left breast is diminishing; patient takes a thyroid tabloid daily.

Dr. Lendon also showed a Fallopian tube (right), removed on account of the rupture of a five weeks' pregnancy in the isthmian half; it gave rise to alarming hæmorrhage, but patient recovered from the operation, and three days later a complete uterine decidua came away without any obvious pain or hæmorrhage.

Dr. A. M. Cudmore showed an aboriginal from whose abdomen he had removed over two quarts of hydatids by two incisions, only 23 days previously.

Dr. Swift exhibited a man with some cutaneous nodules in the palms of hands. The diagnosis was doubtful. He was going to keep the patient under observation, and would bring him up again.

Drs. Verco and Swift exhibited a man suffering from simple idiopathic muscular atrophy.

Professor Watson showed the following specimens:—(1) Tubercular epididymitis, complicated by left scrotal sinus and right sided hydrocele, from a man, *æt.* 50, with a good family history.—*Dr. F. Magarey.* (2) Mass of omentum wrapped round the dead and flaccid distal half of a rigid appendix from a boy *æt.* 14, who on several occasions had been laid up with appendicitis. There was no collection of pus. This demonstrates a point in the defensive mobility of the omentum. The boy's sister had been cured of a similar condition at the age of 11. Before operation the lump could be felt close to the mid-line, across which it was movable.—*Dr. J. A. G. Hamilton.* (3) Prostate 5¾ oz., removed by Freyer's operation from a man, *æt.* 80. Most of the prostatic urethra and enlarged middle lobe came away with the smaller (left) half of the prostate; a smaller strip remained attached to the larger (right) half. Patient recovered without a bad symptom.—*Dr. R. Stirling* (Melbourne.) (4) Diminutive left kidney from a man, *æt.* 60, who possessed a commensurably large right kidney. Although the renal vessels were very small, the ureter was almost the same size as that of the larger (right) kidney. I noticed a similar condition in a footballer who died from the effects of an accident to his right kidney in Melbourne last month, and I have experience of several other cases bearing upon this question. (5) Uterus with an interstitial spongy myoma, endowed with a separate capsule apart from the uterine wall. It simulated a six months' pregnant uterus from a spinster, *æt.* 34.—*Dr. J. A. G. Hamilton.* (6) Uterus, with an interstitial myoma full of spaces containing a jelly-like fluid, from a 10-para, *æt.* 49.—*Dr. O'Sullivan* (Melbourne.) (7) Portion of stomach and adjacent intestine, removed post-mortem from a woman who during life had undergone two operations: (*a*) Gastro-enterostomy for supposed ulcers of stomach; (*b*) partial gastrectomy and enterectomy for cancer, several months later. Perfect union has taken place in the closed ends of the duodenum and stomach, also in the gastro-jejunal and jejuno-jejunal junctions (Roux's operation).—*Dr. Giles.* (8) Portion of lower jaw, cheek, lip, and cervical glands removed *en masse* (on the lines laid down by MacCormick) from a man, *æt.* 60, who made a very rapid recovery.—*Dr. Cudmore.* (9) Similar specimen from a man, *æt.* 72 (except that the growth involves more of the mucous surface of cheek), who went into the garden on the fourth day. Vet.-Surg. Desmond's tooth-cutter divided the jaw in about one second.—*Dr. Chapple.* (10) (*a*) Cancerous penis removed from a West Indian negro, then *æt.* 67, who returned a year later in an emaciated condition, with urine dribbling from three holes; (*b*) scrotum, urethral bulb, testicles, inguinal, crural, and iliac glands, and fat removed (from same negro, *æt.* 68), in a single piece, in shape like an immense bat; a hernial sac was removed on the right side, and the peritoneum opened, and the external iliac glands on the left side removed. Dr. Fiaschi's paper on eviration of Italian prisoners by Abyssinians without ligature of vessels, suggested this method, which also proved successful in Dr. Cudmore's hands in the case of a white man whose penis had been removed a year previously by another surgeon. Both patients when relieved of their pain, sinuses, glands, and testicles, lost their suicidal tendency and acquired a strikingly cheerful and placid demeanour.—*Dr. Cavenagh-Mainwaring.* (11) Minute dermoid of left ovary. It has only reached the size of a pea, but has already produced a crop of fine hairs and a very small tooth. It was removed from a married woman whose abdomen was opened for other reasons.—*Dr. J. A. G. Hamilton.* (12) Kidneys and pelvic contents of a man, *æt.* 52. A cancer of rectum, which recurred after six months, was removed a second time, and the bowel brought out through the anal canal, prepared by removal of its mucosa, although the ureters were uninjured. Patient never again secreted a drop of urine during the 60 hours of remaining life.—*Dr. Giles.* (13) Pancreas showing widespread fat necrosis, from a man *æt.* 67.—*Dr. J. C. Verco.* In connection with this specimen, Dr. J. C. Verco said the patient, a man *æt.* 67, was admitted to Lightward, Adelaide Hospital, on August 12th, 1904. He was quite well until Sunday, the 4th, when diarrhœa came on, lasting only one day. His bowels were not moved again until the 6th, and then only by enema. He vomited on the evening of the 4th; the emesis continued for 48 hours and has not occurred since. On the 5th his abdomen became very swollen and tense and rather tender, but is less so now. From the beginning he has had a peculiar mental condition. He would not speak, and in replying to a question says nothing but "Yes" or "No" or "I don't know." He has had a cough for 13 years, following influenza, and has been raising thick muco-pus; no hæmoptysis. Fourteen months ago he had an attack of vomiting, with constipation for a week, and again five months ago. Has had headaches about once a week; very severe for the last three months. He had an attack of giddiness in March, and would have fallen had he not been able to sit down. On admission: He lies comfortably in bed; breathes quickly and somewhat stertorously; groans when touched anywhere or moved. Pulse 84, regular and of good volume; temperature, 99°; tongue furred; heart's apex beat impalpable; sounds clear, but feeble. Some rhonchi over back of lungs. Urine, 1020, acid, some albumen, no sugar; scar of an old hard chancre on the penis. Pupils small and equal; knee-jerks increased; plantar reflex absent. He has incontinence of urine; at first he had retention. He was given a pill, after which his bowels were well moved. He was put on tr. digitalis m. v., liq. strychninæ m. iv., sp. amm. aromat. m. xx., aq. ad. 1oz. On the 15th he was given Guy's pill. On the 16th his breathing was very rapid, and at night he was restless and excited and died. I did not see the patient during life, and am indebted to Dr. L. Hayward for the above notes. A necropsy was made 10 hours after death. The body was well nourished, but flabby, with a pale skin. Costal cartilages were calcified. Blood throughout the body was still fluid, but not watery. The lungs showed well marked emphysema; the base of the left was adherent to the diaphragm over the area of splenic contact. Some excess of fat on the heart, which was otherwise normal. The stomach contained only mucus. In the intestine there was much orange-coloured bile. The liver was of full size, with an exaggerated dome so as to simulate a tumour; its capsule was smooth. The gall-bladder was adherent to the transverse colon, with the thickened walls and a normal storage capacity, and contained 10 or 12 white facetted calculi, and orange-coloured bile. The spleen was of normal size and friable, and was enveloped in an omental irrigation. The great omentum formed an adherent transverse pad which glued together the stomach and transverse colon; it had developed an upward backward twist over the splenic flexure of the colon and spleen, which it partially enwrapped. It was sown with small areas of fat necrosis. The peri renal fat and the fat in the iliac fossa behind the peritoneum was thickened and brawny, and contained numerous hailstone-sized foci of fat necrosis. Similar areas existed in the mesentery of the small intestine (although the mesenteric glands were not enlarged), and sparsely in the parietal peritoneum. The left suprarenal capsule was transformed into a blood-filled cavity, as big as a billiard ball. The bladder was pale, the prostate not enlarged. The pancreas was enlarged in all its dimensions and adherent to the back of the stomach (though easily separated). There were numerous foci of fat necrosis which were most marked on its gastric surface (at the back of the lesser sac). No foci were found on the membranes or in the organs in the chest. The pancreatic duct was nowhere dilated; no signs of obstruction at any one point in its course were to be found.

The President extended a hearty welcome to Dr. J. W. Corbin, who has just returned from England.

Dr. Corbin, after expressing his thanks, gave a graphic account of the last annual meeting of the association at Oxford, at which he was a special delegate from this branch. He also explained the result of the conferences with the colonial and reorganisation committees, in which he was invited to take part.

A long discussion then took place on Dr. J. G. Wilson's paper—(to appear next issue)—on "A Case of Eclampsia," which discussion was then adjourned till next meeting.

Queensland.

A MEETING of the Branch was held at the School of Arts, Toowoomba, on Saturday, October 8th. Dr. Æneas McDonnell was voted to the chair, and Drs. Freshney, Falkner, Sheaf, Price, Nicoll, Godsall (of Toowoomba), Dr. Flynn (Ipswich), and Drs. Robertson, Turner, Lockhart Gibson, Wield, Orr, and Brockway, hon. secretary (of Brisbane), were present. Visitors: Dr. Henricksen (Toowoomba), Dr. Pain (Allora).

Dr. GODSALL exhibited radiographs showing the conditions after separation of the lower epiphysis of the humerus in "fracture of the elbow," and advocated treatment of the condition by extreme flexion instead of the usual rectangular method.

Drs. WIELD and LOCKHART GIBSON said the plan of putting up such fractures by extreme flexion had been the custom of the Edinburgh school for very many years.

Dr. FRESHNEY remarked that the excessive effusion of the tissues about the joint would render extreme flexion impossible in some cases.

Dr. TURNER advocated flexion without splints as the best treatment.

Dr. BROCKWAY said that it should not be forgotten that a normally useful arm might be obtained by the older method of treatment by rectangular splint, though the radiographs showed that after such treatment there was malposition of the fragments. He congratulated Dr. Godsall on the excellence of the radiographs.

Dr. WIELD exhibited a safety-pin which had been swallowed by a child of 19 months and passed three days later in semi-liquid fæces.

Dr FALKNER read a paper on "Suggestions as to the Pathology of Acute Anterior Poliomyelitis." (See p. 506.)

Dr. TURNER said that the theory brought forward by Dr. Falkner was an engaging one, but that the question must remain *sub judice*.

Dr. BROCKWAY spoke of some cases which had come under his notice during the past few days.

The HON. SECRETARY read for Dr. BYRNE a paper on "The Prevention of Post-operative Intestinal Paresis by Subcutaneous Injection of Atropine and Eserine." (See p. 513.)

Dr. ROBERTSON referred to the value of belladonna, even when applied externally, in chronic constipation and allied conditions.

Dr. SHEAF spoke of the value of belladonna in such cases, and in reference to Dr. Byrne's results remarked "that it was an ill wind that blew nobody any good."

Dr GIBSON said that the treatment advocated by Dr. Byrne was interesting, since the actions of atropine and eserine were antagonistic, atropine producing paralysis through the nerves, and eserine action of the muscles directly. He regarded eserine as the active agent in the treatment.

Dr. MCDONNELL suggested that eserine alone should be tried in some cases. He remarked that the ante-operative subcutaneous injection of morphia and atropine succeeded by an enema three days after abdominal section gave good results in many cases.

Dr. FALKNER hoped that some method of inducing action of the bowels by subcutaneous injection would be suggested that would obviate the present painful method of medication by the mouth.

After the meeting the visitors were entertained at a supper by the Toowoomba members, the chair being taken by Dr. McDonnell.

Victoria.

THE ordinary monthly meeting of the Branch was held on October 5th. Dr. Weigall (president) in the chair, and eight members were present.

Dr. Fox read a paper entitled "The History and Development of the Light Treatment." He illustrated the paper with many lantern slides, and also exhibited some ultra-violet lamps.

At the conclusion the PRESIDENT expressed the pleasure and instruction that Dr. Fox had given the members, and congratulated him on his power of imparting his knowledge, and thanked him on behalf of the members for the great trouble he had taken in bringing his electrical apparatus to the rooms to demonstrate his paper.

Ballarat.

THE ordinary bi-monthly meeting was held at the Ballarat Hospital on September 29th, 1904, at 8.30 p.m. Present: President and eleven other members. Apologies: Drs. Cussen, Hardy, Salmon, Affleck-Scott, and Wilson.

Minutes of previous meeting read and confirmed.

Correspondence from Dr. Beattie Smith, Medical Defence Association; Dr. H. R. Salmon, Victorian Branch, and Mr. T. R. Treolar.

Drs. A. E. MARTIN and M. C. LIDWILL tendered their resignations, which were accepted with regret, the President remarking that the branch was greatly indebted to Dr. Lidwill for the number of pathological specimens he had so carefully prepared and exhibited during the past two years.

The SECRETARY reported that Dr. H. Pern had left the district.

Dr. MCGOWAN read "Notes on a Case of Barlow's Disease." (To appear in a future issue.)

Dr. JORDAN, in opening a discussion on the paper, considered that milk should always be boiled to protect consumer from the results of contamination during milking and distribution.

Dr. MORRISON strongly objected to boiling of milk, and even thought that boiled milk was a cause of diarrhœa. He mentioned a case of scurvy in a woman of 65, who had been living on bread and butter and black tea for a long time; this cleared up on fresh milk and plenty of oranges; no medicine.

Dr. CHAMPION recalled a case in which he had cut down on the femur and found an extensive extravastion of blood between the periosteum and bone. As the result of discussion it was agreed that fresh milk was an essential in treatment of these cases.

Dr. BENNETT read "Notes on a Case of Aphasia with Rapid Recovery." He thought that in the absence of any foci for embolism the cause was hæmorrhage. The arteries were thickened; there was a long history of alcohol, but no diminution in liver dulness.

Dr. LIDWILL asked if a pachymeningitis might not have been the cause, and recalled a case of lead encephalopathy in which bulbar symptoms came on suddenly and rapidly cleared up.

Dr. STEELL thought cause was probably hæmorrhage.

There were no exhibits, and the meeting then terminated.

REPORTS OF OTHER SOCIETIES.

Border Medical Association.

THE last quarterly meeting of the Border Medical Association was held at Wangaratta on September 6th. There were present: Dr. Andrew (president), Harkin (Chiltern), vice-president; Harris (Rutherglen), McCardel, Boyes, and Henderson (Wangaratta), Kennedy and Marlienckroct (Albury), Coane and Shuter (Beechworth), Patterson (Tallangatta), Johnstone (Yackandandah), and Lang (Corowa).

Dr. KENNEDY read a paper on his personal experiences of new drugs in the treatment of disease (to appear in a future issue), and the President, Drs. Shuter, Harris, Coane, Boyes, and Patterson spoke on the subject.

Dr. LANG read a paper on "Hydatids," which was spoken to by Drs. Coane, Shuter, Harris, Kennedy, and the President.

The next meeting of the Society, which now numbers 33 members, will take place at Wangaratta in the first week in December.

Balmain District Medical Association.

THE annual meeting of the above Association was held on September 29th. There were present: Dr. R. A. Wilson (president), Dr. Carruthers (hon. secretary), Dr. Davidson, Dr. McIlroy, Dr. S. Finlay, and Dr. S. Shirlow; three members were absent.

Dr. WILSON gave a *resume* of the last year's work, based purely on the minutes. Referring to the Balmain Hospital dispute, he said that when the honorary medical staff resigned, the hospital committee advertised for a staff to fill the vacancies, but failed to get any replies. Dr. Kelly, who had been appointed as paid medical officer to the hospital, was then asked to get colleagues and for a time he was successful. However, one medical man neglected his work, and was called upon to resign. Another left the district, and a third resigned. Dr. Kelly being left practically without assistance, the hospital was nearly empty, and the committee, seeing that the hospital was getting into disrepute, interviewed Dr. Kelly, who promptly offered to resign. This was immediately accepted, with the result that Dr. S. Shirlow was appointed paid medical officer, and the following gentlemen were elected to the hon. staff:—Dr. J. B. McIlroy, Dr. L. G. Davidson, Dr. Sinclair Finlay, Dr. C. U. Carruthers, and Dr. G. D. Menzies, all of whom are members of the Balmain District Medical Association. Thus the Balmain Hospital dispute was brought to a satisfactory conclusion.

At the conclusion of the President's address, the election of office-bearers for the ensuing year took place. Dr. R. A. Wilson, who had the month previously been entertained at a theatre party and supper by the members of the Association for his work and hospitality, was re-elected president, his efforts during the past year being eulogised. Dr. Carruthers was also re-elected hon. secretary.

Dr. DAVIDSON gave notice of his intention to move that the meetings of the Association should be held monthly instead of quarterly as heretofore.

"CHARLEMOUNT" (Sydney) PRIVATE HOSPITAL, 24 Darlinghurst-road (opposite Macleay-street).—For surgical and medical cases. Fees, from £3 3s.—Miss McGAHEY, late Matron, Royal Prince Alfred Hospital. Telephone 433 William-street.

Opening of the Queen's Memorial Infectious Diseases Hospital.

ON October 1st the Queen's Memorial Infectious Diseases Hospital at Fairfield, in the shire of Heidelberg, Victoria, was opened for the reception of patients, and two days previously a large number of persons interested in the establishment assembled on the grounds at the invitation of the Committee of Management for the purpose of taking the last opportunity that would probably be available for inspecting the site and the buildings. The hospital grounds were granted to the municipalities of the metropolis by the Government. The buildings, accommodating some 50 patients, have been erected at a cost of about £26,000, the greater portion of which was subscribed by the public, a considerable portion by the Government, and a small portion by the metropolitan municipalities. The responsibility of control and management has been undertaken by only a few councils, and the Government has in accordance with the provisions of the Health Act promised to find pound for pound of the money expended by them in the management and maintenance of 50 beds.

The buildings comprise two large pavilion wards with large separation rooms and annexes, each pavilion accommodating about 25 patients, also an administration block for the medical superintendent, steward and matron, a separate block for the nurses, and the usual offices for cooking, washing, and disinfecting purposes and stabling. All the buildings are of one floor only (except the administration block, which is built in two floors), and stand on grounds which admit of accommodation being provided for about 500 patients. The nurses' block is widely removed from the wards; the complete plan provides also for another similar block separated from the first by a complete suite of apartments for the matron and female servants. The provision of the two blocks for nurses is designed to allow of separation of nurses engaged in attending on two different classes of patients.

No observation ward has yet been erected. In the complete plans it is proposed to build two blocks, one on either side of the administration offices, for accommodation of two kinds of infectious cases. These, with the two large pavilions, would enable the managers to isolate three different classes of disease at one and the same time, and it is contemplated that they will be the next additions to the institution. The floors throughout are constructed of mineral asphalt and are crowned and graded with the object of allowing ready surface drainage. The interiors of the compartments throughout the institution are so constructed as to allow of their being hosed throughout.

Admission to the institution is allowed on an order of the Board of Public Health, when the Government meets all expenses of the case, or on order of any council sharing in the responsibility of management, or from the districts of other councils on promise of payment by such councils of all expenses incurred in the treatment. Arrangements have been made for the isolation at the present time of two different classes of disease.

The first case, one of scarlet fever, was admitted on October 1st, and several cases of diphtheria were admitted on the 3rd idem. Dr. S. Allen has been appointed as medical superintendent, and Miss E. Conyers as matron.

REVIEW OF CURRENT MEDICAL LITERATURE.

OBSTETRICS AND GYNÆCOLOGY.

On the Passage into the General Maternal Circulation of Alcohol which has been introduced into the Liquor Amnii.

Nicloux, Maurice (*Bulletin de la Soc. d'Obst. de Paris*, June-July, 1903, Nos. 6-7). Nicloux has already demonstrated that alcohol introduced into the stomach of a pregnant animal will find its way quickly into the liquor amnii. It has been demonstrated that sulphate of strychnia (bar) and iodide of potassium (Toerngren) both pass from the liquor amnii into the maternal circulation. Nicloux has injected alcohol into the liquor amnii of guinea-pigs and leeches, and he has found that it rapidly passes into the maternal blood.

Sextuple Pregnancy.

Bandouin, Marcel (*Gazette Medicale de Paris*, April 2nd and 30th, 1904). While the occurrence of quintuple pregnancy has been generally admitted, the possibility of a sextuple birth has been denied. Bandouin has carefully reviewed the literature relating to this subject, and concludes that sextuple pregnancy can and does occur. Of the five cases recorded in his paper, he regards three as quite authentic. The first case of sextuple pregnancy put on record was in 1805. The history of the mother is interesting. In her first marriage, which lasted 22 years, she gave birth to 30 children—27 boys and 3 girls. In a second marriage she had three pregnancies, which yielded 14 boys—first three, then five, and lastly six infants at a birth. All the six children were stillborn, and, unfortunately, the placenta was not carefully examined. Bandouin is disposed to think that only two ova were impregnated in this case, each of which produced three fœtuses. The second case of sextuple pregnancy (American) was reported in the *Boston Medical and Surgical Journal* of 1847. Bandouin doubts the authenticity of this case, and has been unable to verify the reference. Two of the six infants are said to have survived. The third case (Italian), recorded by Vassali in 1888, was carefully observed, and there is no reason to doubt its authenticity. The patient, 36 years of age, who had already given birth to six single children, married a widower, 41 years old, who had 10 children. He said that five of his cousins—all brothers—each had twins by their respective wives. The patient had a child in the first year of her marriage, suckled it till it was 11 months old, and weaned it on account of another pregnancy. In the early months the abdomen became unusually large, but there was no œdema of the body or lower limbs. She became very thin and anæmic. At the fourth month the abdomen was like a pregnancy at term, and at this time the membranes suddenly ruptured, without the occurrence of pains. Shortly afterwards one fœtus was born, and Vassali was summoned. The abdomen was still enormously distended; fœtal parts could be felt, but no active movements were detected. The following day four more fœtuses were born. The placenta, which was firmly adherent, had to be removed manually, and in the substance a sixth fœtus was found. The fœtuses—four male and two female—were alive at birth, but died soon afterwards. The placenta looked like a single one, but each fœtus had apparently been developed in a distinct sac of amniotic fluid. Bandouin believes that there were three separate ova concerned in this pregnancy—the first giving rise to two boys, the second to three girls, and the third to a single girl. Three placenta must have been united so as to simulate a single one. The fourth case (quoted by Vortisch) is not authenticated. The fifth case, carefully recorded by Vortisch in 1903, occurred in a negress. The woman had previously given birth to twins, quadruplets, and triplets in successive pregnancies, and in the present instance—her sixth pregnancy—she had conceived by another husband. Hence the maternal origin of the multiple births in this case. The six infants—five male and one female—died very shortly after birth, and were photographed by a missionary; the photograph is reproduced in Bandouin's paper. It seems probable that three ova were impregnated in this case, but Bandouin lays great emphasis on the necessity of making a careful examination of the placenta, as in this way only is it possible to judge of the number of ova concerned in the pregnancy. He will not admit the possibility of a sextuple pregnancy arising from the impregnation of a single ovum.

Hereditary Eclampsia.

Bagot, L. (*L'Angou Medical*, June, 1904.) The author's paper is of interest as suggesting the influence of some hereditary factor—a point already referred to by other writers—upon the occurrence of eclampsia. The patient, a robust peasant woman, 26 years of age, was seven and a half months pregnant with her first child. She then complained of headache, lumbar pains, and continued insomnia. The urine contained a large quantity of albumin. Bagot prescribed milk diet and saline purgatives, and warned the patient of her danger if she neglected to follow his instructions. She then told him that both her mother and eldest sister had had convulsions at the birth of their first children, therefore she would readily carry out the treatment advised. In spite of the precautions taken, the symptoms persisted, and the albuminuria did not diminish. Bagot ordered a nightly dose of chloral, and as the patient was very strong, he contemplated bleeding her, but this was not done. Twelve days later he was hastily summoned, as labour had commenced. Headache had increased, insomnia was complete, and anuria had developed. Labour went on quickly till the head was on the perineum; then there was prolonged delay. As the first blade of the forceps was being introduced, a very violent convulsion occurred. A living child was rapidly delivered, and then the patient became conscious for a few minutes. Fits continued for 24 hours afterwards, in spite of chloroform inhalations, chloral and bromide in large doses, and the abstraction of blood by leeches. The patient made a good recovery, and in a few weeks there was no albumin in the urine. When the patient was having frequent convulsions, and seemed alarmingly ill, her mother, who was present, treated the matter with unconcern; she and her eldest daughter had passed safely through similar and more severe attacks. Bagot then learned that his patient's mother had had eclampsia with twins in her first pregnancy; the fits came on before labour, and lasted for three days, during which time she was partially comatose. In her second confinement there was loss of consciousness lasting for half an hour, but the subsequent pregnancies were normal. The eldest sister of the patient, also very healthy, had eclampsia with her first child, the fits coming on before labour and continuing for 48 hours, during which time there were periods of complete coma. Her other pregnancies were normal. With regard to his own case, Bagot lays stress on two points: (1) The occurrence of eclampsia in spite of milk diet and other precautions taken for 14 days, and (2) the very striking appearance of heredity in the symptoms. What is inherited—a special instability of the nervous system or the insufficiency of some organ—it is impossible to say.

On Mental Disturbances in Pregnancy and Childbirth.

Klix (*Graefe's Sammlung*, 1904, vol. v., No. 6). The author discusses the various mental phenomena at some length and gives statistics from the works of British and other authors. He narrates several original observations. Among his conclusions are the following:—The mental disturbances are not in general differentiated from the psychoses occurring at other times. In every case of mental alienation in childbirth, the possibility of an infective process must be kept in view. Fever and local phenomena in a puerperal infection do not always run a course parallel to the psychic phenomena. Any serious interference with consciousness at the beginning of the puerperium must excite suspicion of severe sepsis or of eclampsia.

The Effect of Hysteropexy upon Subsequent Pregnancies.

Oui (*Rev. de Gynecol. et de Chirur. Abd.*, May-June, 1904). The questions asked are: Does hysteropexy influence subsequent pregnancies, and, if this influence exists, is it due to the sole fact of fixation of the uterus, or is it connected with certain methods of technique employed? The two operations considered are those known as ventro-fixation and vagino-fixation. *Ventro-fixation:* The author considers that this operation has, in the majority of cases, no harmful influence either on the evolution of pregnancy or the course of labour, provided that the uterus is stitched to the abdominal wall entirely by the anterior surface, below the line of insertion of the tubes, care also being taken not to include in the sutures too extended a surface of the uterine wall. He altogether condemns fixation of the fundus, especially when it is fixed close to the symphysis pubis. In this position, development during pregnancy occurs solely at the expense of the posterior wall, while the anterior wall becomes hypertrophied and thickened, so much so that it is an obstruction at the pelvic inlet, and consequently the cause of mal-presentations and difficult labour. *Vagino-fixation:* Prognosis here from an obstetric point of view is distincly more unfavourable than in the case of ventro-fixation. Abortions are frequent, and troublesome labours numerous. The latter are due for the most part to the extreme deviation of the cervix, which, in a certain number of cases, renders intervention by the natural route very difficult, or even impossible. Eleven Cæsarean sections, following vagino-fixation, have been recorded in the last eight years. It is possible that Dührssen's latest procedure may obviate this. He fixes the uterus very near the fundus, reconstitutes the vesico-uterine cul-de-sac, and brings about adherence of the anterior surface of the uterus to the peritoneum on the posterior surface of the bladder. The author thinks that most surgeons will find the fixation obtained by this method very weak, and that there will be a tendency to return to the more firm vagino-fixations, which are too often associated with grave dystocia. He is inclined to the view that vagino-fixation should be reserved for those cases where the woman is no longer subject to the risk of pregnancy. Some important figures are given in the article. Demelin, in 112 pregnancies subsequent to ventro-fixation, records 14 abortions and six premature labours. Noble, in 56 pregnancies, notes four abortions. Küstner, in 98 pregnancies, notes 15 abortions or premature labours. On the other hand, Küstner, in 48 pregnancies following vagino-fixation, records 18 abortions; and Demelin, in 95 pregnancies, 19 abortions. Dührssen's figures in regard to vagino-fixation by his latest procedure are marvellous; 70 pregnancies all happily terminated save one, and in that case death was from hæmorrhage due to placenta prævia.

Accidental Perforations of the Uterus.

Fairchild, D. S. (*Annals of Gynecol. and Pediat.*, vol. xvii., No. 5). Fairchild thinks that this condition is far commoner than is supposed, because the circumstances under which it happens in gynæcological practice, or on efforts to produce abortions, generally leads it to be passed over, the results which at times follow being often assigned to other causes. Brothers, New York, has collected 66 recorded cases, of which 17 died and 49 recovered. In legitimate practice, the use of the sound or curette is the most common cause; when the uterine wall is softened by inflammation or disease the sound can pass through so easily that the operator may be unaware of the accident. The author thinks that perforation of the uterus by the curette would not be so serious if it were not for the associated treatment of irrigation probably washing into the abdominal cavity some infective material, and therefore increasing the risk of peritonitis. Perforation with a sound which has been properly prepared for exploring the uterus will not generally be followed by serious consequences; but with a curette it is much more dangerous. About 25 per cent. of the recorded cases have proved fatal. The treatment of accidental perforation of the uterus depends on the nature of the instrument used and when it is treated, since owing to the dirty instruments used for criminal abortion, and the dishonesty of the operator, many cases do not come for treatment till *in extremis*; whilst in legitimate practice the fear of censure has its influence on the nature of the efforts made. In four cases of perforation with the curette in the author's own practice, three were successfully treated by rest and the local application of ice, while in one the fundus was delivered through an anterior vaginal incision, and the opening closed with catgut sutures. Rosenfeld treated a case in a similar manner, whilst Glaser and Keatman each mention a case of perforation with a curette which were treated by hysterectomies. Schwarz, while curetting after an abortion, having perforated the uterus, packed with gauze, circumscribed peritonitis resulted, the patient recovering. Guerard, Billroth, Mann, and Alberti each performed a laparotomy for the repair of perforation. In three of these cases the intestines had passed into the body of the uterus, and in two the intestine was resected. All recovered. The author advises the following treatment:—Perforation with a small, clean instrument, no irrigation being used, should be treated with rest and the application of ice. If irrigation has been employed and a mild infection results, rest and ice; if a severe infection results, vaginal hysterectomy. If the perforation is large, either deliver the fundus through an anterior vaginal incision and suture rent with catgut, or remove the uterus. It is not good surgery to allow an opening of any considerable size to go unrepaired, not only on account of the danger of infection of the peritoneum, but also on account of the risk there is of the intestine escaping through the opening in the uterus and becoming strangulated.

OPHTHALMOLOGY.

The Function of the Hyaloid Canal and some other New Points in the Mechanism of the Accommodation of the Eye for Distance.

T. P. Anderson Stuart, M.D., etc., Professor of Physiology in the University of Sydney (*Journal of Physiology*, March 29th, 1904). This paper gives the result of some valuable observations on the above subject. It begins with a *resume* of our present knowledge of the anatomy of the suspensory ligament, showing how it is divisible into three separate portions, fashioned somewhat in the form of the letter Y. The stem of the letter represents the ciliary portion attached to the lens capsule; the anterior limb, the portion attached to the ciliary bodies, etc.; and the posterior limb attached to the hyaloid, and branching out like the roots of a tree to be inserted into the anterior and outer portion of the vitreous body. The author accepts as a " fact " the theory of Helmholz, that during accommodation the suspensory ligament is slackened, and that the lens becomes thicker or more convex in virtue of its own elasticity.

[It is doubtful whether in view of the opinions of Mannhardt, Schoen, and Tscherning, this " fact " should be considered established. These investigators maintain that the ciliary muscle during accommodation exerts a pulling or stretching effect, rather than a relaxation. It has always seemed difficult for us to accept what Tscherning calls the " mystical notions concerning the elasticity of the lens." Moreover, it is pretty certain from Grossman's recent observations that Helmholz was wrong in thinking that accommodation was mainly if not entirely due to an increase in the spherical curvature of the anterior surface of the lens, and that the view first enunciated by Cramer and Thos. Young, and supported by Schoen, Mannhardt and Tscherning, is correct, viz., that during accommodation the anterior surface changes into a hyperboloid, the centre becoming more conical, the periphery more flattened, and that, as Grossman and Tscherning have both shown, the posterior surface of the lens recedes considerably at the centre, and also assumes a hyperboloid form, so that the shape of the lens during accommodation is a double lenticonus. It is difficult to imagine how elasticity of the lens could possibly account for its assuming this shape (which Tscherning and Crzellitzer explain as being due to the greater resistance of the central parts of the lens to the traction of the ciliary muscle). Nor is it easy to understand how the fibres of the zonula which pass to the anterior surface of the lens in a direction parallel to that of the radial fibres of the muscle can cause a relaxation of the anterior capsule when the muscle contracts, though the fibres which go at an angle, to the posterior surface, may be relaxed. Grossman, in criticising Tscherning's tension theory, says that the admission of the latter that the equatorial diameter of the lens increases during accommodation is fatal to the theory; but Tscherning's latest utterances are to the effect that the diameter of the lens *diminishes*, for the reason that the fibres of the zonula are not attached to the edge, but to the anterior capsule of the lens, within the edge.

To return to Anderson Stuart's paper, the value of which appears to be increased, rather than lessened, if Tscherning's view be correct. After pointing out the fact, first demonstrated by himself in 1885, that the suspensory ligament is firmly attached to the vitreous, forming a strong limiting membrane, quite ndependent of the lens capsule, he gives us quite a new planation of the *role* played by the canal of Stilling, in the mechanism of accommodation, and it is here that his paper touches an important point in Tscherning's theory. He shows that Stilling's is a real canal, easily demonstrated by staining and easily distended by injecting fluid. Now, the trembling of the lens seen under the action of eserine, or perhaps during strong accommodation, has been held to be a stumbling-block to Tscherning's theory, and an argument in favour of Helmholz's. Tscherning believes it may be explained by the fact that the lens substance is free in its capsule, and the *posterior* capsule relaxed in accommodation, but he goes on to say: " There is an inference which seems to force itself on us—an inference which will seem, perhaps, surprising—namely, that the central parts of the vitreous body become liquid when accommodation reaches its maximum. I do not believe it possible to give any other satisfactory explanation of the trembling of the little lenticular image." It is hard to conceive how the central parts of the vitreous could *become* fluid, but that Tscherning should put forth the necessity for such an explanation appears an evidence of great sagacity as well as a remarkably firm conviction of the truth of his theory. The true explanation, not so very wide of the mark, but of which Tscherning was evidently ignorant, appears to us to be furnished by Anderson Stuart's observations. He concludes that during positive accommodation the pull on the vitreous portion of the suspensory ligament drags the vitreous forward and inwards. This compresses the anterior portion of the vitreous and the anterior portion of Stilling's canal, and forces its contained lymph to the posterior end of the canal, which is thus dilated. By this action the bulk of the anterior portion of the vitreous is diminished, which would explain the backward movement of the centre of the posterior surface of the lens, and also the trembling. Further, the drawing forward and inwards of the posterior portion of the vitreous would press forward and flatten the peripheral portion of the posterior surface of the lens, giving it the hyperboloid form that Tscherning maintains it assumes. During negative accommodation, according to Anderson Stuart, when the vitreous portion of the suspensory ligament is relaxed, the ciliary zone of the vitreous recedes outwards and backwards, thus relatively dilating the anterior and compressing the posterior part. " The function of the canal is thus to provide an adjustable reservoir of mobile liquid which may be rapidly displaced backwards and forwards " in positive and negative accommodation respectively. Thus we have provided the liquid central part of the vitreous that Tscherning wanted for the full explanation of his theory, and which it seems to help more than it does that of Helmholz. The paper contains many other very interesting points in regard to accommodation, and also brings out the importance, from a developmental point of view, of the function of the canal of Stilling.

[On the other hand, Cicerone denies the existence of the canal of Stilling in the adult.]

NEUROLOGY.

Subacute Combined Sclerosis.

Brain (Spring, 1904) contains an account of one of those cases which are now described by many observers under the above heading. According to the writer (Taylor) of the paper in question, this " curiously hybrid term " covers very many varieties of the same disease, but he believes that the disease is essentially a unity, just as much as is tabes dorsalis, and that most, if not all, cases of ataxic paraplegia are cases of this disease. Many of the cases are associated with a marked condition of anæmia. The pathological changes are marked degeneration of the dorsal and lateral white columns. The disease runs its course in from one to four years, as a rule. The case described in this paper showed the following symptoms in a woman 63 years of age:—Disease commenced with weakness and unsteadiness in legs; lifted her feet unnecessarily high in walking; wasting of the limbs; tingling sensation of deadness in the legs; shooting pains in legs; difficulty in passing water, and at times incontinence; knee jerks very active. *Ten months later:* Unable to walk; thin and weak; all limbs showed rigidity and tremulousness, with tingling and numbness; girdle sensation; impairment of sensibility to touch, pain and temperature all over lower limbs; stereognostic sense and sense of position lost in all limbs; knee jerks active; slight ankle clonus, and extensor plantar reflex. This condition ended in death. Numerous similar cases are quoted.

Transverse Lesion of the Spinal Cord in Man.

In the same number of *Brain*, Collier gives the results of numerous clinical and pathological observations on the effect of total transverse lesion of the cord occurring in man. He quotes about 15 cases, but observations were made on a greater number. He refers to the fact that in the cat and dog, spastic paralysis results from transection, the deep reflexes are exaggerated, and the most complicated reflex actions can be elicited, the "scratch" reflex, for example. Sometimes the transection is followed by temporary diminution or abolition of the deep reflexes, which lasts for a few minutes only. "In man, as the result of total transverse lesion of the spinal cord, not only are the knee-jerks and other deep reflexes permanently abolished in the region supplied by the caudal segment of the divided spinal cord, but, in addition, the muscles waste and lose their faradic excitability, and the sphincters lose their tone, the only sign of self-action remaining in the isolated part of the spinal cord being the occasional presence of certain of the skin reflexes in a greatly reduced degree. These phenomena occur in the absence of any recognisable structural change in the ventral horn cells, ventral roots and peripheral nerves of the paralysed region. That muscular wasting, loss of faradic excitability, and loss of sphincter tone may occur in cases of transverse lesion of the cord was long ago pointed out by Sir William Gowers, but in his opinion the presence of these signs definitely proved the co-existence of concomitant or consecutive changes in the lumbo-sacral enlargement. Attention is drawn to the fact that when the knee jerks have disappeared in cases of progressive transverse lesion becoming total transverse lesions, for a certain time after such disappearance the knee jerks may be again obtained subsequent to long-continued faradisation of the lower limbs. In other words, the lumbo-sacral centres in man have not sufficient self-action to maintain the muscular tone when severed from the higher centres, but they may be temporarily roused by peripheral stimulation into such a higher state of activity as will allow the knee jerk to be obtained. The importance of this fact, here recorded for the first time, in proving that the loss of knee jerk is due to isolation from the higher centres, and not to any concomitant injury to, or consecutive changes in, the lumbo-sacral centres, is obvious." Many of the cases came to autopsy, but no changes could be detected in the caudal segment of the cords.

Union of Nerves.

Langley and Anderson (*Journal of Physiology*, vol. xxxi., No. 5) write on some very interesting experiments on the union of nerves. The chief conclusions arrived at are the following:—1. When the central ends of two nerves are joined, no functional union takes place between them; impulses set up in one nerve cannot pass across the neurone to the other. 2. When the peripheral ends of two limb-nerves are joined, no functional union takes place. 3. When the central end of a limb-nerve is joined with two peripheral nerves, stimulation of one peripheral nerve, after complete severance of the conjoined nerve from the central nervous system, may cause contraction of the muscles innervated by the other. They consider this to be an axon reflex set up in fibres from the central end, one branch of which has joined one peripheral nerve and the other branch has joined the other peripheral nerve. 4. When one of the peripheral nerves consists entirely of afferent fibres, an axon reflex may still be produced by stimulating it. Since efferent fibres do not, so far as is known, unite with afferent fibres, the axon reflex obtained supports the view that regeneration takes place by a down growth of axis cylinders. 5. The crural nerve can make functional union with the sciatic and so be artificially lengthened. 6. The internal saphenous nerve when joined to the sciatic does not acquire a motor effect. 7. The phrenic nerve when united with the cervical sympathetic can cause the usual effects produced by stimulating the latter nerve. 8. The cervical sympathetic can unite with the recurrent laryngeal nerve and cause motor effects. 9. The cervical sympathetic can unite with the phrenic nerve and cause contraction of the diaphragm. 10. The cervical sympathetic can unite with the spinal accessory nerve and cause contraction of the sterno-mastoid muscle. 11. They do not find that afferent fibres can unite with the peripheral end of the cervical sympathetic in such a way as to transmit nervous impulses to it or to the superior cervical ganglion. 12. Pre-ganglionic sympathetic fibres cannot unite with post-ganglionic fibres. 13. Post-ganglionic fibres of one side cannot make functional connection with pre-ganglionic fibres of the other side. 14. The post-ganglionic fibres leaving the anterior end of the superior cervical ganglion do not make functional connection with the hypoglossal fibres supplying the tongue muscles.

Autogenetic Regeneration of Nerves.

Further work by Langley and Anderson in the same number of the *Journal of Physiology* has an important bearing on the question raised by Bethe, and by Ballance and Stewart. The writers produce much experimental evidence to disprove the accuracy of the conclusions arrived at by the last-named workers, and encourage one in the belief that the views of his are entirely correct, viz., that regeneration of nerves only occurs by the growing out of axones from the centre into the degenerated portion.

On the Effects of Joining the Cervical Sympathetic Nerve with the Chorda Tympani.

The same authors (*Proc. Royal Soc.*, lxxiii., 489, p.99) describe the effects of the above experiment. After a considerable time the sympathetic nerve was stimulated, causing hyperæmia of the sub-maxillary gland. This goes to show that vaso-constrictor fibres may unite with vaso-dilator peripheral cells and so become vaso-dilator fibres. It further follows that it depends upon the kind of nerve ending whether post-ganglionic sympathetic fibres act as vaso-dilators or vaso-constrictors.

CORRESPONDENCE.

London.

(FROM OUR OWN CORRESPONDENT.)

Annual Meeting of the British Medical Association —Physical Deterioration—Pasteur Memorial—The Parkes Prize—St. Bartholomew's Hospital.

THE seventy-second annual meeting of the British Medical Association was held this year at Oxford. This is the fourth occasion on which the Association has chosen the ancient University city for its annual reunion. About 1500 members from the United Kingdom, Ireland, India and the Colonies attended the meeting, which was presided over by Dr. William Collier, Physician of the Radcliffe Infirmary, Oxford, and Lichfield Lecturer in Medicine at the University. The meeting was inaugurated on the 26th July by a service in Christ Church Cathedral, at which the sermon was preached by the Rev. James F. Bright, Master of University College. The offertory, as is usual, was divided between Epsom College and the British Medical Benevolent Fund. During the afternoon of the same day the annual general meeting was held in the Examination Schools. Dr. Griffiths, the retiring president, in opening the proceedings, said he wished to make allusion to the recent death of Sir John Simon, the pioneer of modern sanitary science. He might safely say that Sir John Simon had saved far more lives during the last 50 years than all the armies of the world had destroyed. During the same period Sir John had done for sanitation what Lister had done for surgery and Pasteur for bacteriology. After referring to the success which had attended the reconstruction of the Association, and to the gratification which was felt by the whole profession in the interest taken by his Majesty the King and his Royal Highness the Prince of Wales in all questions relating to the public health and the national wellbeing, he introduced his successor, Dr. Collier, to the chair, describing him as "an able and accomplished physician, who had advanced to the first rank of the profession at an early age through no influence except his own perseverance and force of character." In the evening Dr. Collier delivered his presidential address in the Sheldonian Theatre. The proceedings commenced by the Vice-Chancellor welcoming the Association on behalf of the University, a polite formality which was repeated on behalf of the city by the Mayor. The Middlemore prize was then presented to Mr. J. H. Parsons for his researches in ophthalmology. Then followed the presentation of distinguished foreign guests and colonial delegates. The President, on rising to deliver his oration, was received with cordiality. He referred at some length to the growth and development of the Oxford Medical School. Great changes had occurred, he said, in the teaching of science in the University since the Association was last at Oxford, and more particularly in those branches of science connected with the early training of the student of medicine. New professorships had been established, a band of readers, lecturers and demonstrators had been organised, buildings had been erected and fully equipped, with the object of encouraging students of medicine to join the University for their early scientific training. Dr. Collier then sketched the subsequent rise of the Medical Faculty at the University, and said his audience would be enabled to judge to what extent the desires expressed by the Medical Association in 1879 had been fulfilled. The Association asked in that year that at least human anatomy, physiology, general pathology and *materia medica* must be taught. For many years past adequate provision and suitable accommodation had been provided for the teaching of these subjects. From 1883 to the present date students had been, and were being, taught the outlines of clinical diagnosis in medicine and surgery, yet it would appear that little was known by the general public of these important changes which had been carried out at Oxford during the last quarter of a century. The question arose whether the advantages claimed more than a quarter of a century ago as being likely to accrue through associating the Universities of Oxford and Cambridge in medical teaching had, in any way, been achieved. For some years a considerable number of medical graduates had passed forth into the world after spending three or four impressionable years at one or other of the two Universities. He could not doubt that the majority of these graduates would declare that their mixing at the University with men of their own age who were taking up other subjects for their life-work had done much to widen their own general culture. The University had also benefited. He thought the establishment of the Medical School on a modern basis had introduced into the University a body of students starting their career with a definite object in view, and compelled, by the very nature of the case, to lead a steady, strenuous life. But the greatest advantage to be noted had been the influence of the University student on the other medical students of our great metropolitan schools. All of them were familiar with the "Bob Sawyer" type of medical student; but he fancied, as a living type, "Bob Sawyer" had for many years ceased to exist. Many of them could remember the time when any more than usually disgraceful outbreak of rowdyism in London was invariably attributed, rightly or wrongly, to medical students. But this was a matter of the past. The medical student of a quarter of a century ago undoubtedly bore a very bad character in the eyes of the public. He no longer did so, and he attributed the change largely to the influence of the University graduates who had come among them. The University graduates were older men, had a more settled purpose in life, and had a clearer and better idea of good and bad form. It was these older students who had largely dominated in recent years the standard of life at the London schools. Their influence had been all for good. If the standard of general culture was raised by a University education, then as the numbers participating in this education were increased, the status of the medical profession was certain to be raised. After referring to the past benefactors to medicine in the University, the speaker asked, What of the future? Fortunately the urgent need for fresh endowments, and the appeal to persons of wealth and position in this country, had been made by the most influential men of the day. He would quote the words of the patron of the Association, his Majesty the King, in his gracious reply to the loyal address of the University of Cambridge on March 1 last: "The older Universities must receive new endowments if education within my realm is to be kept at its proper standard of efficiency." Less than a fortnight ago a most influential deputation, on which both Oxford and Cambridge Universities were represented, waited on the Prime Minister to urge the Government to give substantial money grants to the various Universities throughout the country. The members of the deputation were very plainly told that the Government would not be able to find the money. Oxford University owed its existence to generous benefactors in the past, and we could but hope that in the present and future these new endowments of which his Majesty spoke, and of which the University now stood in such urgent need, would be forthcoming. They had seen in the last decade large sums of money given or bequeathed for the endowment of education in many of the big provincial centres. One found it difficult to understand how it was that a University such as Oxford, with its noble traditions and long roll of illustrious dead, which had been for many centuries the acknowledged training school of the leaders of thought and action in this country, failed to appeal to those who were in a position to do both their country and the cause of education a service. In a Convocation held on the 27th July the degree of D.Sc., *honoris causa*, was conferred upon the following gentlemen :—Thomas Clifford Allbutt, M.D., F.R.S., Regius Professor of Physic at Cambridge; Andrew Clark, F.R.C.S., Vice-President and Chairman of the Council of the British Medical Association; Thomas Dryslwyn Griffiths, M.D., late President of the British Medical Association; Jonathan Hutchinson, F.R.S., late President of the Royal College of Surgeons; Sir William Macewen, M.D., Regius Professor of Surgery in the University of Glasgow; Sir Patrick Manson, K.C.M.G., M.D., F.R.S. of the London School of Tropical Medicine; Sir John William Moore, M.D., late President of the Royal College of Physicians of Ireland; William Osler, M.D., F.R.S., Professor of Medicine at Johns Hopkins University, Baltimore. The address in Medicine was delivered by Sir William Church, President of the Royal College of Physicians, London, and that in Surgery by Sir William Macewen, Professor of Surgery in the University of Glasgow. The various sections were arranged as in previous years, and there was no falling off in the number of papers sent nor in the interest attaching to the discussions which followed them. It was decided that the next annual meeting should be held in Leicester, and that the invitation from Canada to hold the meeting of 1906 in Toronto should be accepted.

The report of the Inter-Departmental Committee on Physical Deterioration was published on July 28th. The committee was appointed in September last, and was composed of Mr. Almeric W. Fitzroy, Clerk of the Council, who was chairman; Colonel G. M. Fox, Inspector of Physical Training under the Board of Education; Mr. J. G. Legge, Inspector of Reformatory and Industrial Schools; Mr. H. M. Lindsell, Principal Assistant Secretary of the Board of Education; Colonel G. T. Onslow, Inspector of Marine Recruiting; Mr. John Struthers, of the Scotch Education Department; and Dr. J. F. W. Tatham, of the General Register Office. Mr. Ernest H. Pooley was secretary. The terms of reference were :—"(1) To determine, with the aid of such counsel as the medical profession are able to give, the steps that should be taken to furnish the Government and the nation at large with periodical data for an accurate comparative estimate of the health and physique of the people; (2) to indicate generally the causes of such physical deterioration as does exist in certain classes; and (3) to point out the means by which it can be most effectually diminished." The essence of the report is an expression of opinion, founded upon the evidence of the majority of the 68 witnesses who were examined, that the belief in any general progressive physical deterioration is not supported. The report is divided into three parts. The first is an examination of the evidence deducible from the War Office figures, and a statement of the steps required to obtain reliable data for determining questions of national physique; the second deals with the causes and indications of degeneracy in certain classes of the community, and the means by which it may be arrested; and the third gives a summary of the principal recommendations which the committee desire to make. Among the more important of the committee's recommendations are :—The organisation of a permanent anthropometric survey, with a view to the collection of definite data bearing on the physical condition of the population; the creation of an advisory council, representing the departments of State within whose province questions touching the physical well-being of the people fall; the adoption of drastic measures for dealing with the housing of the poor and the prevention of overcrowding. In regard to the solution of this difficult problem, the committee suggest that it may become necessary for the State to take charge of the lives of those who from whatever cause are incapable of independent existence in the crowded slums under conditions of decency and hygienic safety. They say :—"In the last resort this might take the form of labour colonies on the lines of the Salvation Army Colony at Hadleigh, with powers, however, of compulsory detention. The children of persons so treated might be lodged temporarily in public nurseries or boarded out. With a view to the enforcement of parental responsibility, the object would be to make the parent a debtor to society on account of the child, with the liability, in default of his providing the cost of a suitable maintenance, of being placed in a labour establishment under State supervision until the debt is worked off." Their further recommendations include :—Greater attention to the preservation of open spaces; a stricter enforcement of the law against pollution of the air by smoke and noxious vapours; a greater security of tenure in office for medical officers of health; a more detailed inspection and general supervision of workshops; a systematic and practical training of teachers to enable them to give rational instruction in schools on the laws of health, including the demonstration of the physical evils caused by drinking; the obligatory inclusion of drill and physical exercises in the curriculum of continuation classes; a well-arranged and periodic medical inspection of children at school; the prohibition of the sale of tobacco and cigarettes to children below a certain age. In the second section, which is the most interesting of the report, the committee discuss all kinds of sociological questions—the character of employment in relation to physique, the general conditions of factory employment, alcoholism, depletion of rural districts by the exodus of the best types, the alleged tendency of superior stocks in all classes towards a diminished rate of reproduction, food and cookery, conditions attending the life of the juvenile population; and special topics, such as defective eyesight and hearing, dental disease, insanity, and so forth. The committee have much to say upon the enormous waste of human life which goes on under the name of "infant mortality," and from a statistical summary supplied to them by Dr. Tatham they deduce three important facts :—First, that infantile mortality in this country has not decreased materially during the last 25 years, notwithstanding that the general death-rate has fallen considerably; secondly, that the mortality among illegitimate children is enormously greater than among children born in wedlock; thirdly, that about one-half the mortailty occurs in the first three months of life. They express their conviction that "the abuse of alcoholic stimulants is a most potent and deadly agent of physical deterioration," and, further, give it as their opinion that "another fruitful and one of the most unsuspected causes of deterioration lies in the long-ingrained habit of tea-drinking at breakfast and other times in factories and foundries."

The unveiling of a monument to Pasteur in Paris on July 17th was made the occasion for an imposing tribute of homage to the great scientist on the part of all sections of the public. A sum of £14,000 was collected by international subscription, and it was resolved that the memorial should take the form of a statue, the celebrated sculptor, Falguière, being entrusted with the work. The monument has been erected facing the dome of the Invalides in the Place Breteuil, and bears on its pedestal the simple inscription, "Pasteur, 1822—1895. Erected by international subscription." The President of the Republic, who was present at the inauguration ceremony, arrived punctually at 10 a.m., and the ceremony, which included 11 orations, lasted till close upon midday. The monument was handed over to the City of Paris by M. Wallon, Perpetual Secretary of the Académie des Sciences, and was accepted, on behalf of the Municipal Council, by M. Desplas. Before taking his departure the President made his way to where Madame Pasteur was seated, and, with emotion, shook hands with her.

The Parkes' Prize is offered triennially, and consists of a bronze medal and 75 guineas. The essay set for competition on this occasion was upon "The Prevention of Disease amongst Armies engaged in Active Operations in the Field, with special reference to the Sanitary Organisation of a Field Force," and the prize has been won by Major R. Caldwell, R.A.M.C. Two other competitors, Major Freeman and Major F. Smith, were highly commended for their theses. The competition for this prize is open to officers of the Navy, Army and Indian Medical Services. The subject chosen for the next award is upon "The Sanitary Requirements of Naval and Military Units in Peace and War, with Suggestions for Complete Schemes of Sanitary Organisation Suitable for both the Navy and the Army." Essays must be lodged on or before 31st December, 1906, with the secretary of the Parkes' Memorial Fund, Royal Army Medical College, London.

The King and Queen once more gave expression to the intense interest they take in the London hospitals by paying a visit to St. Bartholomew's on July 6th, when the King laid the foundation stone of the large out-patients' and casualty departments, which are to form the first of the blocks of the new hospital. This block will provide accommodation for many special departments of work, and will be fully equipped with everything necessary to bring the institution up to the level of the most advanced medical and surgical requirements. The present accommodation for out-patients and casualties is so inadequate that the governors have had no hesitation in deciding that the first part of the great scheme of reconstruction which they have embarked upon shall be directed towards the removal of that defect. It is estimated that this building will cost about £100,000. The complete reconstruction of the hospital will involve an outlay of half a million. It is 150 years since St. Bartholomew's has made any appeal for charitable assistance, and the committee now beg for help to enable the hospital to be rebuilt on modern principles. They point out that "the funds which the hospital possesses are adequate, with careful and economical management, to defray the expenses of the ordinary work of the institution; but if these funds should be trenched upon for the necessary work of reconstruction, St. Bartholomew's would inevitably join the large number of other hospitals annually competing for the gifts of the charitable public." It is further stated in the special appeal issued on behalf of the governors that "during the last 50 years seven millions of patients have received treatment. In the hospital to-day there are 670 beds for the reception of patients, and in the Convalescent Home maintained out of the funds of the hospital 70 patients are constantly receiving the benefit of recuperation in fresh air." St. Bartholomew's has been closely associated with the life of the city of London for nearly eight centuries, the site for the ancient foundation having been obtained from Henry I. It has since been accorded the sympathy and active support of no fewer than 11 English kings. The present sovereign, who is now patron of the hospital, occupied the position of president for the long period of 34 years, an office in which he has been succeeded by the Prince of Wales. The ceremonial of laying the foundation stone of the new wing was, by his Majesty's special command, marked by semi-state pageantry. The King and Queen reached Gillspur-street at half-past 12 and were received by the Prince of Wales (the president) and many other representatives of the hospital. A magnificent pavilion, containing seating accommodation for about 3000 persons, was erected for the ceremony. The interior was lavishly decorated; the seats, arranged in tiers, were covered with scarlet cloth; and in the centre of the imposing structure was a large dais, round which were grouped masses of choice flowers and palms. At the back a derrick had been placed, holding the block of polished red granite which the King was to lay later. Their Majesties having bowed in acknowledgment of the hearty plaudits of the audience, the proceedings were opened with a prayer offered by the Bishop of London. Thereafter the Prince of Wales advanced to the front of the dais and delivered an address, to which the King suitably replied. The treasurer then requested his Majesty to lay the foundation stone, and presented Mr. E. B. J'Anson, the architect, who submitted the plans of the new buildings about to be erected, and afterwards begged the King to accept a casket containing the trowel and mallet. The mortar having been spread, the granite block was lowered into position, and having been adjusted was tapped three times with the mallet by his Majesty, who then said: "I declare this stone well and truly laid. In the name of the Father, and the Son, and the Holy Ghost." The two sections of the stone bear the following inscription:—"This foundation stone of the new buildings of St. Bartholomew's Hospital was laid on 6th July, 1904, by Edward VII., King of Great Britain and Ireland and of the British dominions beyond the seas, Defender of the Faith, Emperor of India, near the site given in 1123 by Henry I., King of the English, and ever since devoted to the relief of pain and the cure of disease among the poor of London, and through the increase of knowledge in the medical art here attained to the alleviation of human suffering throughout the world. Fear God. Honour the King." After the ceremony the Queen expressed her pleasure to receive her "charge" as Governor of the Hospital (her Majesty is the first lady to be elected to this position, as well as the first donor to the building fund), and the charge in its sonorous and impressive phrase was then read, requesting the Queen "to acquit yourself in the office with all faithfulness and sincerity." At its conclusion the treasurer presented the emblematic staff of office, which was gracefully accepted amid cheers by the Queen. Bouquets of flowers were next presented to her Majesty and the Princess of Wales by Miss Isla Stewart, the matron, on behalf of the nursing staff of the hospital. Sir Edward Elgar's setting of the National Anthem was most beautifully rendered by Mdme. Albani, supported by Miss K. Jones, Mr. Archdeacon, Mr. Binyon and Mr. Theodore Flint. Their Majesties at its conclusion shook hands with Mdme. Albani, and then bowing to the vast audience left, with the Prince and Princess of Wales, amid a scene of much enthusiasm. Mdme. Albani having sung "Home, Sweet Home," with much pathos and power, the proceedings terminated. Before leaving, the King intimated to the treasurer that he would be pleased to contribute the sum of £1000 to the building fund; the Prince of Wales also subscribed a donation of £500.

A QUESTION IN CLUB PRACTICE.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—Will you in the next issue of the GAZETTE inform me what is a reasonable period for a lodge member to remain on the funds of his lodge after sustaining an impacted Colles fracture of the right wrist. My patient is a blacksmith, and 19 weeks after the accident has great loss of power and stiffness of the wrist joint, and is still quite unable to shoe a horse.—I am, etc., COUNTRY G.P.

[We are informed that a reasonable period for a man to remain on the funds of his lodge after a Colles fracture would be three months. At the end of that time if the fracture has been properly treated he should be able to use his wrist. It is important that all such impacted fractures should be reduced under an anæsthetic. In this particular case it seems clear this was not done, because if the bones had been put in proper position he would not "19 weeks after the accident have had great loss of power and stiffness of the wrist joint." It is possible and probable that this man may never be able to follow his usual employment. But this is no reason why he should be a burden to his lodge. Supposing he lost his hand through an accident, he would not remain on his lodge after the stump had healed. Most lodges have rules that govern such cases. We believe it is usual for a man to declare off the funds of his lodge when he is able to follow *any* employment.—ED. *A.M.G.*]

THE FIGHT AGAINST TUBERCULOSIS IN NEW ZEALAND.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—My attention has been drawn to some remarks made by you in the *Gazette* of July 20th, pages 355 and 356, with regard to the manner in which persons suffering from tuberculosis are treated in New Zealand. You say: "We should be extremely sorry to see such a state of things repeated in Australia *as is said* to exist in New Zealand, where the poor consumptive is hunted out of house and home and is treated in such a way as seems almost incredible in any so-called Christian country. We trust that the Commonwealth Government will pause and carefully consider before they attempt to prohibit the admission of consumptives into this country."

I submit most respectfully that this could only have been written by someone absolutely ignorant of the procedure which is carried out here. That the growing knowledge of the infectivity of the disease has occasioned hardship in some cases in New Zealand as in other countries must be admitted. Lodging-house keepers have been known to decline to accept persons suffering from consumption as boarders, but I take it your charge of inhumanity is directed against the laws and regulations in force here; that you do not suggest that the inhabitants of this colony have less of Christian charity in their composition than the people of New South Wales.

In order that ignorance cannot be urged in the future, I trust that you will do me the honour of printing the following extract from my report to the Minister. It sets out clearly our attitude towards the immigrant suffering from the disease:—

"Another point which is worthy of the most serious attention of the Government is the great number of people suffering from consumption who yearly land in the colony in the search after health. It has been urged by some that we ought to exclude everyone suffering from consumption. This attitude has the support of many, but I think in most cases it comes of ignorance or non-appreciation of the true facts of the situation.

"If the colony were as free from consumption as it is from smallpox or rabies it would still be a matter for careful consideration as to whether it is wise—reckoning on the lowest of bases, namely the monetary one—to prohibit the sufferers from incipient phthisis, who are able to pay for their keep and attendance, from coming to New Zealand in order to avail themselves of the benefits of our climate.

"Viewed from the point of international equity, it *seems to me it would be as unfair as it would be un-Christian to deny any fellow-creatures the privilege of sharing the beneficent effect of our climate.* On the other hand, there need be no hesitation whatever in pointing out to the world at large the unfairness to us, as well as the inhumanity to the sufferers, of consigning a person in an advanced stage of consumption to the irksomeness of a long sea voyage and the divorcement from all he holds dear in the vain will-o'-the-wisp pursuit of a recovery which can never be his. But when we add to this impossibility of cure the fact that the sufferer is next door to penniless, there need be no hesitation on the part of the State to interfere and say, 'We shall not permit the importation of such unfortunates.'

"Any medical man in practice in the colony could from his case-books collect many cases of people who when they landed had no possible chance of recovery, and the only part of New Zealand they ever saw was the inside of a ward in a general hospital; that the exclusion of such cases can be justified on humanitarian as well as economic grounds I have not the slightest doubt."

You will see from this that I have, strange to say, used words almost of equal import in describing the suggestion that persons suffering from consumption in the incipient stage should be precluded from landing in New Zealand as you have in describing what you are pleased to say exists here.

As to the fairness of excluding indigent incurables, it seems to me there can be no question. Why should this or any other colony support the sick of others? As it is, a considerable number of the patients who have been treated at the Government Sanatorium are recent arrivals in the colony. Surely those born in and paying taxes in the colony are entitled to first consideration. The various shipping companies trading to New Zealand have been advised that indigent incurable sufferers from consumption will not be permitted to land unless the shipper enters into an agreement with the State that he will maintain the passenger for five years; surely a measure such as this does not deserve the strong language you indulge in. Your State would not allow an indigent leper or an insane person to land. Why? Is it because of danger to the populace? Assuredly not, but to prevent an unfair burden being placed upon the shoulders of the community. Why should the sufferer from consumption be treated differently? When the attention of a people is drawn to the danger and magnitude of a disease like consumption they not infrequently show an unreasoning fear, with the result that the hard lot of the sufferer is undoubtedly increased; but unless you are prepared to insinuate that New Zealanders are less charitable than the other members of the Empire all semblance of justification for your comments must fall to the ground. I venture to say that few countries, save some parts of America, have done more to try and stem the power of this most formidable disease than has New Zealand. The Government has established a sanatorium for the treatment of cases of consumption, which will equal in suitability and equipment any institution of the same nature in any country in the world. In addition to this, annexes are being erected in connection with country hospitals situated in districts, the climate of which is well known for its beneficial effects in chest ailments, throughout the length and breadth of the colony. If these be un-Christian efforts the interpretation of the word "Christian" will require alteration.

I regret the length of my communication, but the injustice and inaccuracy of your remarks would be sufficient justification in any equitable tribunal, and I would fain hope, Sir, that your sense of fairness will permit you to place on record this absolute denial of the truth of your statements.—I am, etc.,

J. M. Mason,
Chief Health Officer for the Colony of New Zealand.
Sept. 3rd, 1904.

[We willingly publish Dr. Mason's communication, and hasten to assure him that our remarks, to which he takes exception, had no reference to the Public Health Regulations affecting the admission of consumptives to New Zealand. But we referred to the condition of things which we learnt, on good authority, existed at any rate in some parts of New Zealand, in which poor consumptives were not treated with what one would call common Christian charity. It is quite probable that the Public Health Regulations did create, in the minds of some classes of the community, a quite unnecessary degree of scare of the disease, and that this scare was responsible for the treatment meted out to sufferers from this disease. With the general regulations referred to in Dr. Mason's letter we are in entire accord.—Editor, *A.M.G.*]

PRACTICES FOR SALE.

N.S.W.: Prac. in large town, Southern line. Cash income, £600. Appts. £200. Price, £300. Est. 8 yrs.
N.S.W.: Prac. in which £500 yearly can be saved. Price for prac., furn., 12 rooms, 3 horses, everything, £400.
N.S.W.: Prac. nr. Sydney, good town, good climate. Est. 22 years. Price, £300. Strongly recommended.
N.S.W.: Unopp. prac., Southern line. Cash take £500. Only one small lodge. Prompt buyer, £60.
S.A.: Prac. in Adelaide, which for 26 years has averaged £2000 cash annually. This is a general practice, also not a personal one. Good introduction. Price, £1000.
N.Z.—Prac. in Wellington Dis. Average cash income for last five years, £1000; last year, £1325 cash. Est. 10 years. Appts. Hos., £100; lodges, £120. Three months' introduction. Price, £800. Recommended.
N.Z.—Surgical Prac. for Sale, which returns annually £3000 cash. Photos and all particulars of expenses, tc., supplied.

Mr F. W. LOXTON,
16 O'Connell-street, Sydney.—[Advt.]

Medical Notes in Parliament.

Proposed Dairy Bill for Queensland.—

The Hon. D. F. Denham, Minister for Agriculture, has introduced a bill to provide for the registration and inspection of dairies and other premises where dairy produce is prepared or manufactured, and to regulate the manufacture, sale, and export of dairy produce. The bill comprises 29 clauses and 2 schedules. It provides that condensed milk must contain not less than 9 per cent. of butter fat, and 24 per cent. of other solids, unless sold as "condensed separated milk," the latter to be marked "condensed separated milk," in letters not less than an inch square. No person shall supply butter which contains less than 80 per cent. of butter fat, or more than 16 per cent. of water. The appointment of inspectors and officers is provided for. The Minister is empowered to approve of persons competent to make bacteriological, microscopical, or analytical examinations. All dairies and factories must be registered within three months after being so used, or, in the case of existing dairies, before 1st April, 1905. Power is given to inspectors to enter and inspect at all reasonable times any dairy, factory, cooling chamber, conveyance or ship, and take samples. Considerable powers are given to inspectors who may find places unclean, apparatus unwholesome or unfit for use, any stock diseased, any person affected with disease so that the produce is likely to be contaminated, the water supply impure, or any cooling chamber or conveyance unfit for dairy produce. The inspector in such cases may order the immediate cleansing of premises, etc., removal of persons, and forbid the removal of the produce. Persons who think themselves aggrieved may appeal to any police magistrate, who shall hear the case, and such magistrate's decision shall be final. Under clause 12 every owner of a dairy, when disease appears in the stock there, or where any person becomes affected with disease, shall give notice to the nearest inspector. Isolation is to be provided. Clause 13 sets out that on the request of an inspector, every owner of a milk shop, and every milk vendor, shall give a list of customers and of persons supplying dairy produce to him. Clause 14 states that every room used for the storage of dairy produce shall be well ventilated and so constructed as to be capable of thorough cleansing. Every such room shall be limewashed or otherwise treated with approved disinfectant at least once in every four months. Every creamery and factory shall be well ventilated and effectively drained, and shall be thoroughly disinfected as often as may be prescribed. Every cheese-making room or maturing-room shall be well ventilated. All whey shall be forthwith removed to a distance of at least 100 feet, or shall be sterilised by steam. Clause 15 provides that no person shall keep pigs or place or use any fowlhouse, manure heap, or cesspit within a distance of 300 feet from any dairy house or factory. No person shall permit any drainage from any piggery or stockyard to be or flow within a distance of 300 feet from any dairy house or factory, unless in a drain properly cemented. Clause 16.—No dairy produce intended for sale or supply for profit shall be deposited or kept in any room used for domestic purposes or in any place which might cause such produce to be unwholesome or injurious to health. The first schedule gives the following list of diseases in human beings:—Diphtheria, scarlet fever, skin diseases, smallpox, tuberculosis. In stock:—Abscesses, anthrax, blackleg, cancer, garget, mammitis (udder and teat inflammation), pleuro-pneumonia, tick fever or redwater, tuberculosis.

Victorian Charities Bill.—In the Charities Bill to be introduced this session into the Victorian Legislative Assembly provision is made for the appointment of a charities council. Extensive powers will be given to the council to classify hospitals into two divisions. The first will comprise institutions which are absolutely necessary to the community, and the second those which repeat the functions of those in the first division. The intention of the Ministry is to provide institutions in the first division that shall receive a larger share of the Government grant than the others. In addition to this bill it is intended to introduce a number of small bills to provide for raising money for charitable purposes by means of taxes on bicycles, motor cars, carriages, amusements, and sports. By this means it is anticipated that a revenue of £60,000 can be obtained.

Proposed New Medical Bill for New South Wales.

The following is the text of a proposed new Medical Bill, which has been adopted by the New South Wales Medical Board and forwarded to the Chief Secretary, with a request that the Government should introduce it into Parliament as a Government measure:—

A bill to further regulate the practice of medicine and surgery and to amend the Medical Practitioners' Act, 1898, the Medical Practitioners' Amendment Act, 1900, and to provide for other matters connected therewith.

Be it enacted by the King's Most Excellent Majesty by and with the advice and consent of the Legislative Council and Legislative Assembly of New South Wales in Parliament assembled, and by the authority of the same, as follows:—

1. *Provision for reciprocity in regard to medical practice.*—Section 3, subsection 1, subclause (*b*) of the Medical Practitioners' Act, 1898, is amended by inserting after the words "that country" the following words:—"If in the opinion of the Board corresponding facilities for practice are afforded in such country to persons who have received after due examination from the University of Sydney diplomas or degrees in medicine entitling them to practice in New South Wales."

2. *Definition of persons regarded as practising medicine under the Acts in force.*—Section 1 of Medical Practitioners' Amendment Act, 1900, is amended by the insertion at its conclusion of the following words:—"Any person shall be regarded as practising medicine under the provisions of this Act and of the Acts in force regulating the practice of medicine who for gain and reward shall prescribe for or give surgical assistance to, or who shall profess or attempt to heal, cure, or relieve persons suffering from injury or deformity or from disease of mind or body, or who shall advertise to the public in any manner a readiness or ability to heal, cure, or relieve those suffering from injury or deformity, or disease of mind or body."

3. *Deputy Registrars to furnish information to Secretary of deaths of Medical Practitioners.*—The Registrar-General and the district registrars of births, marriages, and deaths shall within three months forward to the Secretary of the Medical Board the names of registered medical practitioners who shall die in their respective districts, and upon receipt of such notification the Board shall remove such name from the register.

4. *The Board may make regulations.*—The Board may, subject to the provisions of this Act and of the Acts in force regulating the practice of medicine and the registration of legally qualified medical practitioners, make regulations providing for the times and places of the meetings of the Board, the removal and restoration of names of medical practitioners from the register, the definition of due courses of study and recognised schools of medicine, the conduct of business, and generally for carrying the above-named Acts into effect. All such regulations shall, when approved by the Governor and published in the *Government Gazette*, have the force of law, and shall thereupon be laid before both Houses of Parliament without delay.

5. *Common Seal may be varied.*—The common seal shall not be affixed to any certificate or other document, except in the presence of a quorum of the Board. Such seal may be varied from time to time at the discretion of the Board.

6. *Short Title.*—This Act may be cited as the Medical Practitioners' Acts Further Amendment Act, 1904.

OBITUARY.

Thomas Hewlett, M.R.C.S. (Eng.), L.S.A. (Lond.), 1858, Fitzroy, Victoria.

Dr. Thomas Hewlett, one of the oldest and best known Victorian medical practitioners, died from heart disease at his residence, Fitzroy, Melbourne, on September 28th, aged 69. He was one of the few remaining physicians able to boast of having been in active practice in Victoria for over 40 years. He was born at Alington, Berkshire, England, in 1835, and educated at Wantage Grammar School, and afterwards became apprentice to a Dr. Lister, at Doncaster, Yorkshire, proceeding later on to St. Bartholomew's Hospital, London, where in 1858 he obtained his diplomas of M.R.C.S., England, and L.S.A., London. Subsequently he joined the second battalion of the 19th Regiment, and for a short time was stationed at Cork, Ireland. Shortly after the close of the Indian Mutiny the regiment was ordered to India, whither Dr. Hewlett went, and where he remained until 1862, when he resigned his commission and removed to Melbourne, entering straightway upon the practice of his profession in Fitzroy. Deceased's second wife and two sons survive him. The funeral took place in the Melbourne General Cemetery on September 29th.

Patrick Moloney, M.B. (Melb.), 1867.

News was received in Melbourne on September 23rd of the death of Dr. Patrick Moloney, at Ulverstone, England. The deceased was the first medical student at the Melbourne University, and took his degree in 1867. He held a leading position in the profession in Victoria till 1898, when he left Melbourne to make his home in England, and has resided in England and on the Continent for the past seven years. Latterly he had been suffering from dropsy, and his death occurred at Ulverstone. He was well known in the early days of Victoria as one of a band of writers, of which Marcus Clarke, Kendall, Burney, and Gordon were members, and he contributed to the early publications of that State. In 1876 Dr. Moloney married Miss Quirk and has left one daughter, who is married to Mr. Boland, an English barrister, and a member of the House of Commons.

Medico-Legal and Medico-Ethical.

Serious Charges against Medical Men.—At the last sittings of the Central Criminal Court, Sydney, before Mr. Justice Simpson and jury, William Otto Eichler, a medical practitioner, pleaded not guilty to a charge that he did at Sydney, on July 22nd last, murder Sarah Jane Whiffen.

In opening the Crown case the Solicitor-General said that the accused was a duly qualified medical man. The girl died from peritonitis, which the medical evidence would show was caused by some mechanical interference with her while she was pregnant. The girl was afterwards taken to Lewisham Hospital, where an operation was found necessary; but she gradually sank and died on July 22nd. While in hospital her dying depositions were taken, and in them she implicated accused as the man who had performed the illegal operation. After evidence had been given in support of the Crown case, the document signed by deceased as a dying declaration, after some discussion, was then read, in which it was stated that there was no one present when the accused used an instrument on three occasions on deceased. His Honor said that he was bound to advise the jury not to convict unless there was corroboration of the act having been committed by the accused. It might have been done by anybody. The jury returned a verdict of not guilty, and the accused was discharged.

At the same sittings of the Central Criminal Court Frederick William Marshall, a medical practitioner, pleaded not guilty to a charge that he did at Sydney, on August 27th last, feloniously slay Amelia Lynch, a single woman, 26 years of age. The Solicitor-General said that accused was charged with the manslaughter of Amelia Lynch. The woman came from Young to Sydney on August 18th last, and went to Nurse Mayne's house at Palmer-street, Sydney. The medical evidence showed that the woman had had a miscarriage. Marshall was summoned to deceased at 2 a.m. on August 27th, and the woman died about 9 a.m. on the same day. Medical evidence would show that death was due to peritonitis, together with the infliction of a wound in the uterus. The evidence that the Crown would put before the jury was that Amelia Lynch was in her usual health on August 18th, that she arrived in Sydney on August 19th, and was seen by accused on the following day; that from the evidence as to her condition the wound was not inflicted before she arrived in Sydney. The medical evidence would also show that any medical practitioner who inflicted such a wound, and was not conscious of the fact, showed gross carelessness and gross ignorance. It would be shown that the infliction of such a wound could not be done by the instrument, unless used with gross carelessness and gross want of skill, and that the subsequent treatment was absolutely bad, and that the infliction of such a wound hastened death. Several medical men were called and gave evidence in support of the contention that deceased had died from septic peritonitis, the result of a perforation of the uterus. His Honor, summing up, said that if they were satisfied beyond doubt that prisoner, by gross neglect, carelessness, or ignorance, caused the death of Amelia Lynch, it was their duty to convict him of manslaughter; but unless they were so satisfied it was equally their duty to acquit. It was their duty to say whether the girl had met her death at the hands of the prisoner as a result of an act of omission or commission on his part. Although she might have died from septic peritonitis or any other cause—no one could say how—if prisoner had hastened her death he must be taken to have caused it. Were they satisfied that the prisoner caused the perforation? That was the first point, and if he did not cause the perforation the Crown case fell to the ground. If it was caused by the prisoner by gross neglect, carelessness, or ignorance he should be convicted. If they convicted he would like them to say whether it was because prisoner caused the perforation or because he was guilty of the omission in not sending for assistance, or in not having the girl sent to a hospital. He asked the jury to consider what evidence there was at all that prisoner caused the perforation. If he caused it and did not know, he must have been either drunk or mad, and there was no evidence or even a suggestion of that. All the doctors said that the perforation had hastened death. They had to consider whether of necessity it must have hastened the death of the girl to have a perforation like that when she was in a dying state. If it had hastened her death by even half an hour it would be manslaughter. This was a case of circumstantial evidence, as nobody saw prisoner use the instrument, and the jury should not convict unless the circumstances were all consistent with the guilt of the prisoner. The jury, after being locked up all night, failed to agree. The jurymen were then discharged, and the accused was remanded to the next court of gaol delivery at Darlinghurst on November 21st. Bail was allowed, self in £200, and two sureties of £100 each, or one of £200.

UNIVERSITY INTELLIGENCE.

Melbourne.—At a meeting of the council of the Melbourne University on October 3rd, a scheme for the creation of a faculty of dentistry was approved and ordered to be sent to the Senate.

In view of the serious state of the finances of the Melbourne University, a meeting was convened by Janet Lady Clarke at her residence to consider the best means of rendering assistance. The Chancellor of the University, Sir John Madden, presided, and in explaining the objects of the meeting said that it was proposed to increase the schools and teaching staff at the University. He reviewed the financial troubles of the institution and the helpless position in which it had been placed owing to being robbed by one of its officers of £23,000. On the motion of Dr. J. W. Barrett, it was resolved that those present be appointed a general committee to meet the offer of Parliament to contribute pound for pound. Dr. McFarlane announced that subscriptions amounting to nearly £3000 had been received. Suggestions were thrown out that wealthy persons should provide scholarships in connection with the University, and that cities like Ballarat and Bendigo should make such gifts as would entitle them to rank as benefactors of learning.

HUDSON'S "EUMENTHOL" JUJUBES (Registered) are a Gum Jujube containing the active constituents of well-known Antiseptics, Eucalyptol, Thymus Vulg., Pinus Sylvestris, Mentha Arv., with Benzo-Borate of Sodium, etc., and exhibit the antiseptic properties in a fragrant and efficient form. Sold by all chemists; tins, 1s 6d. Are Antiseptic, Prophylactic, reduce Sensibility of Mucous Membrane. Mr. W. A. Dixon, F.I.C., F.C.S., Public Analyst of Sydney, after making exhaustive tests, says:—"There is no doubt but that 'Eumenthol' Jujubes have a wonderful effect in the destruction of bacteria and preventing their growth. . . . I have made a comparative test of 'Eumenthol' Essence and Creosote, and find that there is little difference in their bactericidal action."—[ADVT.]

PUBLIC HEALTH.

New South Wales.

Health of the Metropolis.—Dr. W. G. Armstrong, Medical Officer of Health, reports that the deaths of residents of the metropolis during September numbered 390, a figure which corresponds to an annual mortality rate of 9·05 per 1000 living. The mortality was unusually low even for September, a month which is usually accompanied by a low death rate in Sydney. If the rate above given be corrected by the inclusion of the metropolitan proportion of deaths in benevolent asylums and hospitals for the insane throughout the State it becomes 9·75. Diarrhœal diseases were responsible for nine deaths, of which four were attributed to diarrhœa and five to enteritis. The principal infectious diseases, exclusive of diarrhœa, caused five deaths only, one of which was ascribed to measles, one to scarlet fever, and three to diphtheria. No deaths were caused by typhoid fever. Cerebro-spinal fever caused two deaths, and bubonic plague one. The mortality from phthisis was slightly below the average for September. Forty deaths were registered from this cause. Other respiratory diseases were also below the average. Twenty-four deaths from bronchitis and 38 from pneumonia were recorded. Cancer caused 30 deaths, and diseases of the heart and blood-vessels 62. Infantile mortality was extremely low. Sixty-three deaths of infants under one year of age were registered, corresponding to an infantile mortality rate of 57 per 1000 births. The principal causes of infantile mortality were—prematurity, 13; developmental diseases, 24; respiratory diseases, 9; diarrhœal diseases, 7. Persons attacked by the notifiable infectious diseases numbered 218, of whom 160 suffered from scarlet fever, 37 from diphtheria, 20 from typhoid fever, and one from bubonic plague.

Bubonic Plague.—No fresh cases of this disease have been reported in Sydney since our last issue; but plague-infected rats have been found in some parts of the city.

Smoke Nuisance in the City.—A recent report by Dr. Armstrong, City Health Officer, dealing with the smoke nuisance, showed that the powers possessed by the council to do away with the trouble were very limited, and until an Act of Parliament was passed giving additional powers to the civic authorities nothing of practical value could be done. The general question of the smoke nuisance was becoming urgent in the city, and the acquisition of fuller powers was most necessary. The committee decided to recommend the council to deal with the matter by means of a short Act of Parliament.

Queensland.

Adulteration of Liquor.—A number of hotelkeepers in Brisbane have been prosecuted for adulterating liquor. In some cases ordinary bulk liquor was "broken down" to much below the strength allowed by the law. In others harmful adulterants such as sulphuric acid and tobacco were found in large quantities. In one case it was shown that an inspector under the Health Act purchased some of so-called Wolfe's schnapps from a defendant, and handed it over to the Government Analyst. The spirits, which were taken from opened bottles, were found to be 41·6 under proof. With 18 deg. as a standard for Wolfe's schnapps the liquor was 71 parts schnapps and 29 parts added water. Under a test by distillation the sample was shown to be 32·4 under proof. A landing-waiter in the Customs Department deposed that he had tested Wolfe's schnapps for nine years, and usually found it to be from 14·6 to 14·8 under proof. He had tested four shipments this year, and had only known one occasion when the spirit reached 16 under proof.

During the four weeks commencing September 17th and ending October 8th, 2119 rats and 367 mice have been destroyed in Brisbane; 1604 rats and 345 mice have been bacteriologically examined, of which number one rat and one mouse were found infected. One case of plague in man occurred early in the four-weekly period, and one death took place during the month. There are now no persons remaining under treatment.

HOSPITAL INTELLIGENCE.

Royal Prince Alfred Hospital, Sydney.—At the last monthly meeting of the board of directors of the Royal Prince Alfred Hospital the report on the work of the institution for the previous month showed that 272 patients had been admitted, of whom 54 were accident and non-paying cases, 150 were on Government orders, and 68 contributed to the cost of their maintenance; 181 cases had been discharged cured, 49 relieved, and 12 unrelieved, while 20 had died, leaving 226 in the hospital at the end of the month, during which the average number of beds occupied had been 224; 25 patients had been transferred to the Carrington Convalescent Hospital, and two to the Walker Hospital. The chairman reported that portions of the new pavilions were available for occupation, and within a fortnight the basement of one pavilion and two special wards would be at the service of the hospital. After discussion it was resolved that his Excellency the Governor be invited to officially open the new pavilions, and the chairman was authorised to make the necessary arrangements. The secretary reported that the movement for the establishment of local organisation on behalf of the hospital in the surrounding municipalities was progressing satisfactorily, and that a large majority of the councils had promised co-operation.

Queen Victoria Hospital, Melbourne.—At the last monthly meeting of the committee of the Queen Victoria Hospital for Women and Children, it was resolved to spend a sum of £6 5s 3d (the amount realised by a children's entertainment promoted by Mrs. R. Robson and Miss B. D. Cullen) in the purchase of an additional cot. In connection with a donation of £40 from the Eight Hours Anniversary Committee in August, Mrs. F. F. Ryan and Mr. T. Geddes were appointed life governors. In response to a letter from the Royal Victorian Trained Nurses' Association with regard to the standard of preliminary education for pupil nurses, it was resolved to recommend that candidates for the position should possess a certificate of matriculation or of having been in the sixth class (State school); failing this to pass an examination at the hospital. Thirty-three in-patients were treated in the hospital during the month; the out-patient attendances numbered 1309; new cases, 299.

The Women's Hospital, Sydney.—At the monthly meeting of the board of directors it was reported that the credit balance was £4 6s 11d. Accounts were passed for payment amounting to £220 5s 2d, leaving an overdraft at the Bank of New South Wales of £215 18s 3d. It was estimated that sums outstanding, representing nurses' fees and Government subsidy, amounted to £568 1s 7d. The honorary treasurer stated that a cheque for £383 4s 6d had been received from the Ball of All Nations Committee, and on the recommendation of that committee Mrs. G. M. Merivale was elected a life governor of this institution. There were 102 patients treated at the out-patients' department.

Narrandera Hospital, N.S.W.—At a largely attended special meeting of the local hospital committee it was pointed out that the expenses incurred for treatment were altogether out of proportion to the revenue, and it was apparent that in the course of a few months the institution would be forced to close its doors unless the expenditure decreased or the receipts increased. It was resolved to reduce the number of beds. A committee was appointed to find means of raising revenue. It was decided that all subsidised hospitals in the State should be asked to join in a movement to have the system of granting the subsidy altered, and that it should be given on the basis of the quantity of work done by the respective hospitals.

Wollongong Hospital, N.S.W.—An appeal has been made to the Chief Secretary that a lapsed vote of £2500 placed on last year's Estimates for the purpose of assisting in the erection of a new hospital for Wollongong should be restored to the Estimates for the current financial year. It was urged in support of the request that the present establishment was not only located in an unsuitable position, but did not provide sufficient accommodation for those seeking medical assistance. Mr. Hogue admitted that the present hospital occupied an unsuitable site, but he could not do more than promise that he would place their representations before the Cabinet.

Queen Victoria Homes for Consumptives, N.S.W.—At the monthly meeting of the house committee of the Queen Victoria Sanatorium, Wentworth Falls, and the Home for Consumptives at Thirlmere, the medical superintendent's report at the sanatorium showed that during the past month three patients had been admitted and three patients had been discharged. Of the latter, one case was unsuitable for treatment, two had the disease completely arrested. There are 21 patients in residence. The matron's report (Thirlmere) showed that there were 39 patients in the home. During the month 7 patients had been admitted, while 8 had been discharged. Of those discharged all were much benefited, with the exception of one. The majority of patients were progressing satisfactorily.

Benevolent Society, N.S.W.—At the monthly meeting of the Benevolent Society of New South Wales it was reported that at the Hospital for Women, Paddington, 76 women had been treated in the wards, and 26 children born. There remained at the Hospital for Women at the end of August, 35 women, 10 children; total 45. Regarding the grand fête to be held at the Hospital for Women grounds, Paddington, on October 8th next, the ladies' committee reported successful preparations. Donations for the furnishing fund of the hospital, for which the fête was in progress, were reported to be coming in freely. Arrangements were made by the board to take possession of the new asylum building, Thomas-street, immediately, and it was expected in the course of a few weeks that the new premises would be fully occupied.

Sydney Hospital.—At the monthly meeting of the board of directors the president reported that owing to unforeseen difficulties in connection with the water supply, the Grinnell water drenchers installed on that side of the hospital facing Parliament House were not yet in working order. Mr. G. N. Griffiths was granted leave of absence until the end of the year. Messrs. T. Raine and J. Russell French were appointed life governors in respect of the sum of £500 received from the estate of the late Sir Daniel Cooper.

MEDICAL NOTES.

Compulsory Notification of Pulmonary Tuberculosis.—At a general meeting of the Western Suburbs Medical Association held on September 23rd, the following resolution was carried unanimously:—"That in the opinion of the members of the Western Suburbs Medical Association it is desirable that all cases of pulmonary tuberculosis should be notified to the Board of Health.'"

Clinical Afternoon at the Royal Alexandra Hospital for Children.—The fourth clinical afternoon was held at Valentine-street, Sydney, on Friday, the 23rd September. Dr. Chisholm presided. Dr. Plomley showed for Dr. Jenkins a child, aged five years, suffering a reeling ataxia with increase of knee-jerks. Dr. Read showed a boy, aged 19 years, suffering from Freidreich's ataxia. Dr. Wade showed a child, aged $1\frac{4}{12}$ years, suffering from acquired syphilis, and an infant with an unusual nasal deformity due to congenital syphilis. Dr. Litchfield re-exhibited a child with congenital proptosis, and asked for a diagnosis of a heart murmur in a child aged 10 years. The next meeting will be held on Friday, October 21st.

Sydney Metropolitan Medical Association.—A smoke concert was given by the above Association on October 7th, at Baumann's New Café, Pitt-street, and was attended by over one hundred members and visitors. The president, Dr. Taylor Young, in a few well chosen remarks, took the opportunity of welcoming Dr. Hankins, the first president of the Association, on his return from a tour of England and the Continent. Dr. Hankins, in replying, made some interesting references to his impressions of practice in the old country, after an absence of over 20 years. A capital programme of instrumental and vocal music had been arranged by Mr. J. Edward Sykes, and a most enjoyable evening was spent by those present.

Charitable Donations.—At a communication of the Grand Lodge of Freemasons of New South Wales it was recommended to vote the annual sum of £145, to be distributed to charities as follows:—Queen Victoria Home for Consumptives (to endow one bed), £40; the Royal Alexandra Hospital for Children (to endow one cot), £30; Sydney Hospital, £25; Royal Prince Alfred Hospital, £25; Carrington Centennial Home for Convalescents, £25. The following donations have been forwarded in the name of Mr. Thomas Budd Payne (testator) to the following institutions:—Melbourne Hospital, Alfred Hospital, Austin Hospital for Incurables, Melbourne Benevolent Asylum, and Hospital for Consumptives in Victoria, £41 15s 2d each; and in the names of testator's late wife and daughters—Mrs. R. M. Payne, Mrs. M. E. J. Ogilvy and Miss R. A. Payne—Melbourne Hospital, Alfred Hospital, Austin Hospital for Incurables, Melbourne

Benevolent Asylum, Hospital for Consumptives in Victoria, Women's Hospital, £146 4s 6d each.

The late Sir E. Knox.—There has been placed in the entrance hall, at the Royal Prince Alfred Hospital, a bust of the late Sir Edward Knox, as the result of action taken by some of his friends in this State and in England. The work was executed by Mr. Bertram Mackennal, the well-known Victorian sculptor. By the completion and installation of this monument the long and useful connection between the deceased and the hospital is properly commemorated, as Sir Edward Knox was one of the members of the original committee of Prince Alfred's, and was for many years its chairman.

Dental Education of Children.—The importance of imparting instruction in dental hygiene to children in the public schools of the State has been urged upon the Minister for Education by a deputation from the Dental Association of New South Wales. Dr. Arthur, M.L.A., Dr. Henry Peach (vice-president of the association), Dr. Lever (chairman of the educational committee), and Dr. Charles Hall represented the association. Dr. Lever said the question had been taken up in other countries, and it was of importance as affecting the health of the children. Dr. Peach said that short essays on the subject of teeth should be placed in the school reader. The Minister for Education recognised the importance of the question, seeing that physical welfare was necessary to good mental equipment. As physical training formed a part of the teaching in the schools, he did not see why the request of the deputation should not be granted. He would look into the matter, and anything the department could do would certainly be done.

Australian Health Society.—The second of the series of health lectures arranged by the Australian Health Society was delivered at the Assembly Hall, Melbourne, by Mr. Frank Nyulasy, M.B., whose subject was "The Hygiene of Home Life." The lecturer showed how enormous had been the gain to public health by improvement in the sanitary condition of the homes of the people, coincident with the onward march of civilisation. The situation, lighting, drainage, air supply, and water supply of the house were instructively dealt with, fresh air and ventilation receiving special attention. Drastic measures to prevent overcrowding were advocated. In regard to food, milk should be their staple article of diet, and scientific milk depots were being established in all enlightened cities. No really healthy person required alcohol in any form, and the lecturer showed that alcohol was the most destructive agent at work among the human race. In dealing with mental training, he pointed out that school work should not begin at too early an age, because "educational processes could only be successful when they conformed to that spontaneous unfolding that all minds went through in their progress to maturity." Medical and dental inspectors for schools were recommended.

Liverpool Asylum.—In response to a request by a deputation from the Liverpool Municipal Council for the removal of consumptive and cancer patients from the Liverpool Asylum, which was in the centre of the town, and the utilising of the buildings as railway workshops, the Minister for Public Works stated that he could not recommend that suitable premises be built for these people on account of the present state of the finances.

PERSONAL ITEMS.

Dr. Henry, of Grafton, has been elected vice-president of the Grafton Chamber of Commerce.

The Hon. C. K. Mackellar, M.B., C.M., M.L.C., of Sydney, who has just published the first volume of the Royal Commission on the Decline of the Birthrate and Infant Mortality in New South Wales (of which Royal Commission he is president), has been spending some time on the Continent of Europe.

Dr. Q. Ercole, late of White Cliffs, has started practice at Drummoyne, and at Elizabeth-street, Sydney.

Dr. Scot Skirving returned to Sydney by the "Oceana," and has resumed practice.

Dr. T. Rowan and family returned to Melbourne on October 1st from Capetown in the Aberdeen liner "Miltiades."

Dr. E. K. Overend has resigned his appointment as Medical Officer of Health to the Brunswick Council, Victoria.

Dr Ramsay Sharp has resigned his position as medical officer of the Coast Hospital, Sydney, which he has held for close on two years, and has commenced practice at Railway-parade, Chatswood.

Dr. A. J. Brady is returning to Sydney from his trip to Europe by the "Ortona," and will resume his practice at Lyons-terrace, Liverpool-street, on Oct. 20th.

Dr. Norman Murray, Auckland, has passed his M.D. Edin. examination.

Mr. Neil McDougall, of Auckland, has passed his final examination and obtained his diploma as physician and surgeon at Glasgow.

Dr. R. T. G. Aickin, of Auckland, N.Z., has obtained his M.D. Edin. degree with honours.

Dr. Wheeler, a recent arrival in the colony, has commenced practice at Awaka, New Zealand.

Dr. Truby King, Seacliff, New Zealand, left at the beginning of the month for England, the trip being taken for the benefit of his health.

Dr. D. H. Young, a graduate of Edinburgh University, has commenced practice in Dunedin.

On September 29th Drs. Merrifield and Earle, the medical officers of the Bombala branch, N.S.W., of the United Order of Oddfellows, were entertained at Bombala, and each presented with a silver tea and coffee service.

Dr. R. W. McCredie has transferred his practice at Brewarrina, N.S.W., to Dr. T. Leonard Pinchin. Dr. McCredie's present address is 423 Miller-street, North Sydney.

Surgeon-Lieutenant Bingham Crowther has received the medal with five clasps awarded in late South African war.

For some weeks past Dr. Robt. H. Strong, of Melbourne, has been suffering from somewhat serious affection of the eye, which caused some anxiety. We are glad to learn that Dr. Strong has now completely recovered.

Dr. William Routh, of Springsure, has been appointed to the Commission of the Peace, Queensland.

Dr. J. F. Harris has resigned his position as resident surgeon of the infirmary department at the Womens' Hospital, Melbourne.

MEDICAL APPOINTMENTS.

NEW SOUTH WALES.

Cookson, Reginald George, L.R.C.P. (Lond.), to be Government Medical Officer and Vaccinator at Temora, *vice* Dr. Harold G. Bennetts, resigned.

Grieves, Thomas Arthur, L.R.C.P. (Lond.), M.R.C.S. (Eng.), to be Government Medical Officer and Vaccinator at Burraga.

Hosking, John Edward Francis, M.R.C.S.E., to act as Visiting Surgeon to the gaol at Deniliquin, during the absence of Dr. E. A. Graham.

VICTORIA.

Cole, T. Hobill, M.B., Ch.B., to the Hon. Medical Staff of the Children's Hospital.

The gentlemen named hereunder to be Public Vaccinators for the districts respectively mentioned, viz.:—

Henderson, John Leslie, M.B., from the 1st July, 1904, Eastern District.

Irving, Harold Alfred Cardale, M.B., *vice* Roland Maclean, M.B., resigned, North-Western District

Lyons, Martin Moylan, M.B., *vice* Leslie Thomson Gillespie, M.B., resigned. Northern District.

Pollock, John, M.B., *vice* George Joseph Ley, M.B., resigned, South-Eastern District.

Officers of Health.

Irving, Harold Alfred Cardale, M.B., *vice* Ronald Maclean, M.B., resigned, Shire of Lawloit.

Pollock, John, M.B., *vice* George Joseph Ley, M.B., resigned, Shire of Avon.

Yuille, William Douglas, L.R.C.P., to be Acting Officer of Health, Shire of Winchelsea, *vice* John Anderson, resigned.

SOUTH AUSTRALIA.

Cudmore, Arthur Murray, F.R.C.S., and Newland, Henry Simpson, F.R.C.S., to practice Anatomy in the School of Anatomy, at the University of Adelaide.

The following gentlemen have been appointed to act as Medical Officers to attend to the destitute poor and aborigines within the undermentioned districts, viz.:—

Dawes, R. St. Mark, L.R C.P., M.R.C.S., Gawler South.
Goode, Arthur, M.B., B.S., Terowie, Wonna, and Whyte.
Juttner, F. J. E., M.B., Ch.B., Tanunda.

TASMANIA.

Rodway, F. A., to be Junior House Surgeon at the Hobart General Hospital, *vice* A. J. Triado, resigned.

WEST AUSTRALIA.

Crawford, Arthur William, to be Acting Resident Medical Officer to the Perth Public Hospital, during the absence on special duty of James Thompson. M.B., Ch.B.

Blackburne, G. H. S., M.B., B.S. (Melb), D.P.H. (Camb.), to be Pathologist and Bacteriologist on the Hon. Medical Staff of the Perth Public Hospital.

Blaxland, Walter, F.R.C.S. (Eng.). to be Ophthalmic Surgeon on the Hon. Medical Staff of the Perth Public Hospital.

O'Meara, Patrick Michael, M.B., B.Ch., to be Officer of Health, *vice* Henry Augustus Ellis, M.B. (Dubl.), at Coolgardie.

Palmer, John Richard, to be Acting District Medical Officer and Public Vaccinator at Roebourne, and Acting Quarantine Officer for the port of Cossack, during the absence on leave of J. Maunsell.

QUEENSLAND.

Harvey, William, L.R.C.P. & S. (Edin.), to be Acting Health Officer and Acting Medical Officer at Cairns, Acting Visiting Surgeon of the Prison at Cairns, and an Acting Health Officer during the absence of Richard Alfred O'Brien, M.B.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

The following persons have been duly registered as legally qualified medical practitioners in their respective States:—

NEW SOUTH WALES.

Conolly, Noel Alfred William, M.R.C.S. (Eng.), 1902; L.R.C.P. (Lond.), 1902.

Le Fevre, John Speechly, L.R.C.P. (Lond.), 1904; M.R.C.S. (Eng.), 1904.

Weir, Albert Antliff, M.B. (Melb.), 1902.

Bobardt, Albert Otto, M.D., 1901; B.S. (Melb.), 1889.

Howle, Walter Creswell, L.S.A. (Lond.), 1892.

Heymann, Philipp, M.D. (Leipsic), 1890; State Exam. Certif. (Strassburg), 189[illegible].

For Additional Registration.

Hall, Edwin Cuthbert, M.D. (Sydney), 1904.

Chenhall, William, M.B. (Sydney), 1897, *ad eundem gradum*; M.D. (Melb.), 1903; F.R.C.S. (Edin.), 1904.

TASMANIA.

Rodway, Frederick Arthur, M.B. (Melb.), 1903.

QUEENSLAND.

Macarthur, John Hardie, M.B., M.S. (Glasg.), 1898.

BIRTHS, MARRIAGE AND DEATHS.

BIRTHS.

BLUE.—September 25, 1904, at Warialda, N.S.W., the wife of A. Irwin Blue, M.B., Ch.M.—a son (stillborn).

LLOYD-JONES.—At Gordon, North Sydney, on the 11th September, 1904, the wife of Dr. Lloyd-Jones, Uralla, N.S.W.—a son.

MACDONNELL-KELLY.—September 29th, at Randwick, Sydney, the wife of Walter McD. Kelly, M.D.—a son.

MARRIAGE.

GILL—JAMIESON.—August 9, at St. Mary's (Church of England), Welford, Rugby, England, by the Rev. Maurice Brown, vicar of Welford, George Brittan Gill, surgeon, of Belper, Derby, to Ella Brittan Jamieson, of Sydney, N.S.W.

DEATHS.

HEWLETT.—On the 28th September, at his residence, 102 Nicholson-street, Fitzroy, Melbourne, Thomas Hewlett, surgeon, formerly Assistant Surgeon 2nd Bat. 19th Regiment, and for 42 years in active practice in Fitzroy, aged 69 years.

RANKIN.—On the 13th September, at High-street, St. Kilda Victoria, Henrietta Francis, the beloved wife of William Bailey Rankin, F.R.C.S.

BOOKS RECEIVED.

The Four Epochs of Woman's Life: A Study in Hygiene. By Anna M. Galbraith, M.D. 2nd edition. Revised and enlarged. Philadelphia: W. B. Saunders & Co. 1903. Melbourne: Jas. Little. Price, 7s 6d.

Epilepsy and its Treatment. By W. P. Spratling, M.D., Superintendent of the Craig Colony for Epileptics at Sonyea, New York. Philadelphia: W. B. Saunders & Co. 1904. Melbourne: Jas. Little. Price, 20s.

Clinical Examination of the Urine and Urinary Diagnosis. By J. B. Ogden, M.D. 2nd edition. Philadelphia: W. B. Saunders & Co. 1903. Melbourne: Jas. Little. Price, 15s.

Presented by Mr. L. Bruck, Sydney: Diseases of the Intestines, by Dr. I. Boas, and Introduction to the Study of Medicine, by G. H. Roger.

LETTERS AND OTHER COMMUNICATIONS RECEIVED FROM CORRESPONDENTS:—

Dr. A. G. Fullerton, Murrurundi, N.S.W.; T. W. Lee, Wollongong; Dr. B. B. Ham, Brisbane; Mrs. R. B. Hemmings, Fitzroy, Victoria; Dr. Tidswell, Sydney; Dr. Sydney Jamieson, Sydney; Mr. G. T. Hankins, Sydney; Dr. G. A. Syme, Melbourne; Dr. H. C. Hinder, Sydney; Dr. Chisholm Ross, Sydney; Dr. A. B. Brockway, Brisbane; Dr. J. Wallace Watson, Germanton; Dr. J. M. Gill, Sydney; Dr. T. W. Lipscomb, Sydney; Messrs. Foster and Lingham, Sydney; Messrs. Burroughs, Wellcome & Co., Sydney; Messrs. Parke, Davis & Co., Sydney; Dr. J. Durack, Marble Bar, W.A.; Dr. W. McMurray, Sydney; Dr. Beckett, Northcote, Victoria; Dr. W. W. Ewbank, Perth, W.A.; Dr. W. H. Lang, Corowa; Dr. H. W. Bryant, Melbourne; Dr. F. Antill Pockley, Sydney; Dr. J. B. Gunson, Adelaide; Dr. J. Lockhart Gibson, Brisbane; Dr. E. Temple Smith, Charters Towers; Drs. H. M. Lister and W. J. Fearnley, Charters Towers, Q.; Dr. H. C. Taylor Young, Sydney; Dr. W. G. Armstrong, Sydney; Dr. C. M. Scantlebury, Cheltenham, Vic.; Dr. E. Champion, Ballarat.

AUSTRALASIAN MEDICAL GAZETTE.

A CASE OF HYDATID OF BRAIN.—OPERATION. RECOVERY.

By Arthur E. Mills, M.B., Ch.M., Hon. Assistant Physician, and A. MacCormick, M.D., F.R.C.S., Hon. Surgeon, Royal Prince Alfred Hospital, Sydney.

Clinical History by Dr. Mills.

R.C., a girl, six years of age, was admitted to Royal Prince Alfred Hospital on February 6th, 1904. She is a native of Wandsworth, in the New England district, N.S.W. Her father stated that the child had been ailing for four weeks before admission with persistent headache, that he had noticed slight weakness of the right arm a fortnight after the onset of the headaches, and that a few days before admission to hospital slight weakness of the leg had developed. There was no history of tuberculosis in the family, and the child had hitherto been quite healthy.

On examination the little patient was found to be well nourished. She lay on her right side, with both legs drawn up. The temperature was 99° F. She was an intelligent little girl, and always pointed to the left frontal region as the place where the headache was felt. There was no tenderness over any part of the head, and no difference in the percussion note of the two sides of the skull.

The eye movements were normal, the pupils were equal and reacted equally both to light and convergence. There was slight paresis of the right side of the face in the lower two-thirds. There was paresis of all the muscles of the right upper limb; this paresis was more marked in the muscles of the forearm than in those of the upper arm, and the extensor muscles of the forearm were more affected than the flexor muscles. There was also paresis of the muscles of the right lower limb, more marked in the thigh muscles; but the paresis of the lower limb was not so evident as in the upper limb. The paretic muscles were not wasted. The muscles of the trunk were not appreciably affected. On the right side, the wrist, elbow and knee-jerks were exaggerated, and the plantar reflex gave an extensor response. There was no ankle clonus. There was no sensory defect in any part of her body.

On walking, the little patient limped with the right leg, which was brought forward in a spastic manner. When questioned, she stated that her sight had lately become somewhat dimmed, and on examination of the fundus there was marked optic neuritis in both eyes, more pronounced on the left side. There was nothing abnormal in the chest and abdomen. Urine was normal. The patient stated that only on two occasions had she vomited before admission to the hospital.

The presence of headache, optic neuritis, with history of slight vomiting, pointed conclusively to the fact that the child was suffering from cerebral tumour; and the paresis of the right side of the body showed us that it was in some part of the left motor tract, above the crus cerebri, for there was no involvement of the cranial nerves. It was not probable that the growth occupied the internal capsule, for in this case there would more likely to have been paralysis rather than paresis, and if it occupied either the cortex or centrum ovale, the growth would be fairly extensive. With the history and symptoms only dating one month back previous to admission, it looked as if we had to deal with a rapidly growing tumour; but such a view would be based on the assumption that the history was reliable as to the exact onset of symptoms. In any case it seemed wise to wait and try the effect of fairly large doses of iodide of potassium before resorting to surgical interference.

The records show that the child's condition remained stationary for a fortnight, then the headache gradually diminished and disappeared for about ten days. At this time, too, there was a marked improvement in the muscular paresis. This improvement, however, was only temporary, for on the 29th February, 1904, nearly four weeks after admission, her headaches returned, and she vomited occasionally; and on one occasion, while her arm was being forcibly extended, convulsive movements were set up in it which lasted for about 15 minutes. This was the only time that signs of an irritative lesion of motor tract were present. The headaches gradually became worse, the paresis more marked, the vomiting more frequent. The rest and drug treatment doing no good, we inferred that the trouble was not of a syphilitic nature. Was the growth a hydatid, a glioma or sarcoma, or a tubercular nodule? The absence of any tubercular taint, her country surroundings, and freedom from any known source of tubercular infection inclined me to think it was either hydatid or new growth; and as the district is one where, I understand, hydatid disease is common, the diagnosis seemed to point more to the growth being hydatid than anything else. If so, the symptoms must have been latent at first, for I could not think a hydatid could grow sufficiently rapidly in the motor cortex or beneath it to produce the extensive paretic conditions already described.

At any rate surgical interference was indicated, and Dr. MacCormick saw the case with me. He agreed that operation was called for, and the case was transferred to his care. As the parents lived a long distance from any town, there was considerable delay in getting permission from them for operation.

Surgical Notes by Dr. MacCormick.

On careful consideration of this case I agreed that surgical interference was indicated, and that, as the diagnosis was doubtful, this would have to be of the nature of an exploratory operation. I therefore adopted the following method as being one that would enable me to deal effectively with any of the possible conditions enumerated above.

On April 18th, after a preliminary hypodermic injection of morphia m. 3, the patient was put under chloroform. The Rolandic fissure having been defined by Chiene's method, a large uterus-shaped flap with its base downwards was marked off with the scalpel, the incision being carried at once through the whole thickness of the scalp. The area of scalp included was considered to considerably overlap the Rolandic area. Inside the scalp incision line the bone was divided, except at the base of the flap. The division of the bone was accomplished by a Hey's saw, aided at a few points by small trephine holes about ⅓ in. in diameter. The cut in the bone was bevelled and was completed by a chisel. The whole osteo-cutaneous flap was then levered back so that the bone fractured at the lower part. The dura mater bulged at once, and owing to the greatly increased intra-cranial tension showed little sign of pulsation. There was a bluish area under the upper part of the exposed dura mater, which I took to be due to a hydatid. The dura was cautiously opened by a curved incision inside the bone incision so as to expose the cyst, which quickly gave way, but the fluid from it I was able to keep clear of the exposed tissues, and, finally, with a pair of dissecting forceps the cyst was lifted without further rupture out of the cavity which it had formed for itself in the brain. The cyst appeared to be about the size of a goose's egg, and to affect by pressure the greater part of the motor area. At this stage the patient suffered profoundly from shock. The cavity in the brain was gently irrigated with normal salt solution, the dura closed with fine catgut mattress sutures, and the osteo-cutaneous flap replaced after a drain of gauze surrounded by guttapercha tissue had been placed in the cavity, the edge of the bone flap having been punched with a gouge forceps to make room for the drain. The bevelled edges enabled the bone to fit like the lid of a dish, so that when it was put in position there was no apparent break of continuity in the bones of the skull.

The operation was performed about 8 a.m., and the patient's condition was critical for some hours; pulse rate between 140 and 160 and feeble, with sub-normal temperature. As the day wore on her condition improved a little, and since there was a too free escape of cerebro-spinal fluid, I deemed it wise to have the drain removed, and to place a narrow strip of guttapercha in its place. Next morning there was still a large escape of cerebro-spinal fluid, so that I thought it prudent to remove the drain altogether. The patient continued to improve steadily, and on the 27th April, nine days after the operation, the wound appeared to be completely healed. For some days after the operation there was a large escape of cerebro-spinal fluid, but this gradually ceased. The temperature never went over 100°. On the second day after the operation it was noted that the patient's grip had very much improved, and she quickly regained power in the paralysed muscles. The optic neuritis also gradually disappeared. At the end of five weeks she was sent to a convalescent hospital, and when she returned there was nothing to indicate that she had had such a grave affection as a hydatid of the brain, except the fact that there remained a slight degree of optic atrophy. There was no trace of the paresis, and the skull was everywhere firmly united; in fact, one had to look carefully to find any trace of the operation on the skull. We are indebted to Dr. Brown, house surgeon, and Dr. Buchanan, house physician, for their unceasing care of the patient after the operation and for notes of the history.

The first case of hydatid of the brain that had ever been diagnosed, and the cyst evacuated, was reported by Dr. Verco at the second meeting of the Intercolonial Medical Congress held in Melbourne in 1889, and he has recorded several others since. Altogether we may look upon him as the best living authority on cerebral hydatids. Operations on cerebral hydatids are very uncertain in their results. The first successful case that I know of was under the care of Graham and Clubbe, of this city, and this they state to have been not a really cerebral hydatid, but merely an intracranial one, and to have grown from the arachnoid membrane, the brain being pressed away before it.

Drs. Rennie and Crago, amongst others, report successful cases. I do not know the mortality following operations on cerebral hydatids beyond the fact that it is very high. It would be interesting therefore, to inquire into the cause of the mortality. Most of the fatal cases die within 24 hours of the operation, with a high temperature and rapid pulse, and this Dr. Verco ascribes to the rapid loss of cerebro-spinal fluid, and he ascribes the successful issue of the case of Graham and Clubbe to the fact that the subarachnoid space would be left intact and its fluid would not drain away. That was why I decided to remove the drain from our patient in about 12 hours, although she never had any great rise of temperature. On account of the great mortality, it was then proposed (and practised) to divide the operation into two stages, viz. :—1. Trephining and aspirating. 2. After an interval, reopening the skull, opening the dura and removing the cyst. This can be done through a small opening and apparently with comparative immediate safety ; but I think that this method is open to certain criticisms :—

1. The diagnosis being generally more or less uncertain, the osteo-cutaneous resection recommended by me enables the surgeon to explore a larger area of brain surface, and to deal with any condition, such as tumour, etc., that may be encountered.

2. The trephine hole generally made leaves a defect in the cranial box.

3. Should the cyst contain scolices, as it frequently does, notwithstanding the statement that these cysts are generally barren, infection of the cerebral contents may take place just as it occurs in the peritoneal cavity, or as I have seen it to occur on the fresh surface of a wound.

4. With the large area exposed by my method the cyst may be removed intact ; on turning the patient over merely, it may simply drop out ; and this is of much importance, especially where the cavity in which it is contained communicates with the lateral ventricle.

I would in future adopt the same method of procedure as above described, but, instead of using a drain, I would recommend careful hæmostasis and the immediate closure of the wound in the dura and skin so as to prevent the undue escape of cerebro-spinal fluid. This procedure is as was recommended by Verco. Moreover, it occurred to me that some of the unfavourable results of recorded operations might have been due to the use of such antiseptic substances as the perchloride of mercury, carbolic acid, etc., applied to the brain substance. I determined, therefore, to avoid these as above noted.

(Read before the New South Wales Branch of the British Medical Association.)

ON SOME DIAGNOSTIC SIGNS OF EARLY PHTHISIS.

By Eugen Hirschfeld, M.D. (Strassburg), Honorary Physician to the Brisbane Hospital.

THE bacteriological examination of the sputum—the diagnosis in absentia, as O. Rosenbach calls it—seemed at first to relegate the physical examination of the chest of the patient into quite a subordinate place. The positive evidence afforded by the finding of the tubercle bacilli is, of course, of the greatest value in establishing the existence of tuberculosis of the lungs. But subsequent experience did not entirely confirm Koch's original contention, that the absence of tubercle bacilli from the sputum, after repeated examinations, excluded tuberculosis of the lungs.

It is a frequent experience of most medical men that in certain cases in which the clinical evidence points to the existence of a tubercular focus, the microscopical evidence is negative. Of course, repeated examination may after all prove the bacilli to be present. This, however, is for ordinary purposes in every day's practice a serious drawback, because it is just in those early cases with a doubtful diagnosis that positive evidence either one way or the other is most desirable. Moreover, in these cases it is sometimes difficult to obtain sputum from the lungs for repeated examinations. There remain, however, cases where even subsequent examinations still continue to give a negative result, although the physical symptoms point to the presence of the disease. A case in point occurred to me a number of years ago, where a patient, a police constable, on the clinical evidence and his general appearance, seemed to be suffering from initial phthisis. No tubercle bacilli were present in the sputum; although feeling convinced that he was tubercular, I examined his sputum on various occasions. I assured the patient that he was not suffering from tuberculosis. He was moved to another place. Fifteen months later he came back to Brisbane with a large cavity. One is naturally not anxious to have a second experience of a similar kind. Recent investigations point in the same direction. It is claimed for the old tuberculin that the rise of temperature produced by the injection of 2 to 5 to 10 mgrs. is the most precise reagent for the presence of tubercular foci. On the strength of its accuracy in picking out tubercular patients it has even been demanded by some observers that the tuberculin test should be made compulsory upon patients seeking admission to a sanatorium, since the inoculation with 5 to 10 mgr. tuberculin was not followed by any injurious after effects. In examining the men of two Austrian regiments, Dr. Franz found between 61 and 68 per cent. of all soldiers react to the tuberculin. Surely very few of these men expectorated tubercle bacilli, or else they would not have been recruited (D.M.W., 1904, page 163, quoted by Flugge). The absence of tubercle bacilli from the sputum, therefore, simply proves that no tubercle bacilli are expectorated on that occasion, although the patient may be consumptive. How often are we to examine the sputum, and when is a negative result really final? The great value of the microscopical examination of the sputum, therefore, lies in its positive significance, but the negative result cannot be considered final. It is now nearly fourteen years since Koch introduced tuberculin. In spite of its accurate diagnostic qualities it has not found general acceptance with medical men, although its innocuousness in the minute quantities required for diagnostic purposes has been insisted upon time after time. My personal experience with tuberculin is limited, and does not allow me to draw general conclusions therefrom. Are we in a position to advise our patients to submit to its use in order that we may find out whether they are consumptive? The very fact that the injection is followed by a reaction, one of the symptoms of which is the rise of temperature, proves conclusively that it cannot possibly be indifferent. The rise of temperature is the immediate outward expression of the reaction of the tubercular focus, be it inflammatory or otherwise, upon the general system. To start a tubercular herd which has remained inactive into an open reaction upon the general system, as evidenced by the temporary rise of temperature, is certainly a serious undertaking so long as we are unacquainted with the precise anatomical character of the reaction in the consumptive lung. We are, therefore, driven to pay increased attention to the physical examination of the lungs. I do not intend to discuss exhaustively all the early signs of phthisis, but I wish to describe some symptoms which I have not seen mentioned before, also to make some remarks where my experience in Queensland differs from that in a temperate climate.

Temperature.—My attention was first drawn to the subject in the following manner. Some ten years ago a number of picked aboriginals were brought down from the Gulf of Carpentaria and the Northern Territory for exhibition purposes in the southern colonies and Europe. I had an opportunity of examining them, and made a series of observations about their temperature, with the object of finding out whether an acclimatisation took place in those men accustomed to a very hot climate when being brought to the comparatively cool climate of Brisbane. They were all picked men and physically fine specimens. Most exhibited a slight variability of temperature, but one of the men's temperature (he came from near Croydon; his name was Peter Croydon) showed consistently a greater variability than the others, his temperature rising as high as 100° in the armpit after his tea or after playing at ball. This man subsequently, about ten months afterwards, died from phthisis, although at the time of examination he exhibited no signs of it. I made control experiments on myself for more than three months, from December till March, and found that even great exertions like riding on horseback for ten to fifteen miles on very hot days in the sun did not raise my temperature beyond 99·3° (in the mouth). A healthy man is very tenacious of his temperature within the degrees of heat experienced during our summer (up to about 98°). This result, however, is different from that observed with tubercular patients. Of course I am not speaking of those cases of consumption that habitually have fever, generally in the afternoon, but of patients who exhibit a normal temperature. *The characteristic feature of the early consumptive is the susceptibility of his body temperature* to the temperature of the surrounding atmosphere, a partial failure of accommodation, which latter acts so perfectly in the healthy being. As a result of a large number of observations, the following points may be summarised:—

1. There are two factors which raise the otherwise normal temperature of a consumptive patient - heat of surrounding atmosphere and exertion.

2. Each factor is capable of producing the same result by itself; both combined have a greater effect.

3. During the summer or on unusually hot days at other seasons the effect of the outside heat will raise the temperature of the phthisical patient to between 99·2 and 100·4° maxilla if the patient is following his usual occupation without making any special exertion.

4. This rise of temperature can best be noticed early in the afternoon, between 1 and 3 p.m.; the digestion subsequent upon a meal acting evidently in the same manner as bodily exertion.

5. The effect of outside heat is not marked upon the morning temperature; it may be masked by an abnormally low temperature we are so frequently meeting with in tubercular subjects.

6. If the tuberculosis of the lungs is accompanied by fever, the course of the temperature will be raised by great outside heat by between 2 or 3 degrees, although the patient be absolutely resting.

7. In young and excitable people the rise is more marked than in older and more phlegmatic patients, the fact of coming to see a medical man tending to raise the temperature of the tubercular.

8. Women who menstruate are subject to a rise of temperature without there being anything else the matter with them.

In discussing these results I wish to draw your attention to a similar condition of affairs existing in typhoid fever. If you go through the wards on an unusually hot day you will notice an abnormal rise of temperature in most patients, which rise is not maintained on the following days. Convalescents are affected similarly. It is also characteristic of the high effect of the stand of the thermometer that the afternoon temperature is the one mainly affected. This susceptibility of the temperature of the consumptive manifests itself in very early cases; it does not at all run parallel to the amount of mischief in the lung. It is an interesting question whether the very accuracy of the tuberculin test in producing a rise of temperature is perhaps not due to any specific effect of the tuberculin, but to the increased susceptibility of the tubercular subject to any outside influence, and may perhaps be produced by the injection of other agents beside tuberculin. The rise of temperature through the heat in patients otherwise free from fever is not very great; it varies between 99·2° and 99·8°; it depends upon the degree of heat, also upon the clothing to a certain extent. I look upon a temperature of 99° already as suspicious, but 99·2° is a safe limit. If any considerable bodily exertion takes place at the same time the rise may exceed 100°. In estimating the diagnostic value of this slight rise of temperature, other diseases which might cause such a rise will, of course, have to be excluded. In a few otherwise well marked cases of tuberculosis I have found this rise absent.

Condition of the Spine.—Another symptom of early phthisis to which I wish to draw your attention is the condition of the spine. Of course we all know that when a cavity is formed a curvature of the spine takes place convex towards the side affected. In such cases there will naturally be very little trouble about the diagnosis. But the class of patients I am referring to are those in which the only evidence of tubercular mischief is the retraction of the apex. If the spine be carefully examined it will be found that the column between the sixth cervical and the second dorsal vertebra has got slightly out of plumb, and is, so to say, drawn towards the affected side concave towards the healthy side. The topography of these parts is easily ascertained through the seventh cervical vertebra being the vertebra promminens. Of course it is of importance to see that the patient keeps his head straight, also in marking the identical spots in each vertebra with a pencil. We must remember that the skin is very movable over this portion of the spine, and that the spot marked when stooping will cover an altogether different spot to when standing straight. The deviation of this portion of the spine from the vertical line is not very great, but distinctly noticeable. It is not easily noticed if the patient is fat. but early cases of tuberculosis are not very fat as a rule; also the patient must stand straight. The explanation of this phenemenon is obvious: the vertebra follows the shrinking lung. It is better marked in early cases than in advanced stages of the disease, as the formation of cavities soon leads to extensive lateral curvatures in other parts of the spine, which compensatorily affect the rest of the vertebral column. The deviation from the perpendicular seems to me to be more marked when the mischief is on the right side than on the left side. This may perhaps be due to the preponderance of the muscles on the right side, as most people are right-handed. At any rate this lateral deviation, which can be seen with the eye, may supplement the result of the percussion in finding the upper limit of the lung sound lower on one side than on the other. Calling this deviation a symptom of early phthisis requires, however, some qualification. If the lung has shrunk out of the fossa supraclavicularis sufficiently to make the spine follow it, the process is generally over; it is healing up or has healed up. While the catarrhal process, or rather the tuberculisation, is going on there will be no shrinkage. A deviation, therefore, signifies that the patient has passed through a tuberculosis of the apex. But in some respects it may be allowed to remain as a symptom of early phthisis. *Phthisis is a recurrent disease.* It is astonishing how frequently one apex is discovered to be shrunk, while active mischief with râles can be found in other portions of the lungs, preferably the other apex. In such cases the patient comes with a history of recent trouble, say cough extending over six weeks or two months, or perhaps of a slight hæmorrhage. The recent trouble is of too early a date to account for the retraction. On further inquiry whether the patient on some former occasion has suffered from a persistent cold or cough, the answer will often be affirmative. The shrunken apex, with the deviation of its portion of the spine, is evidence of a former attack of tuberculosis, and râles in another portion of the lungs will have a different significance than if the lungs were otherwise intact. In cases where tuberculosis of the apex has become a matter of the past, or let us say latent and inactive, the evidence afforded by the deviation of the spine becomes of value when there is vicarious emphysema hiding the dull percussion note. In this country it is, moreover, not a by any means infrequent occurrence to see asthma develop where there is unmistakable proof that the patient formerly has passed through an attack of phthisis. The consequent over-distension of the lungs in these cases acts, of course, in the same direction, and more so than the vicarious emphysema. Attention to this symptom may be of value in the examination for life insurance.

Family History and Infection.—The occurrence or absence of phthisis in the family history of the patient has always been considered a valuable diagnostic factor. Our experience in Queensland does not entirely coincide with that of European observers. In a series of 200 cases. in which special inquiry was made with regard to the incidence of tuberculosis, the following results were obtained:—118 cases (59 per cent.) had no occurrence of phthisis amongst relations; 41 cases (=20·5 per cent.) had a phthisical family history in the ascending branch, either amongst parents or grandparents or uncles and aunts; 33 patients (=16·5 per cent.) admitted phthisis in the collateral branch, *i.e.*, amongst brothers and sisters. In 6 cases (=0·3 per cent.) the outbreak of phthisis occurred amongst parents subsequently to the children suffering from it. Of course I am quite aware that a consumptive family history as a rule is not readily admitted, certainly not by those who are being examined for life insurance; but patients, when they know about it, are generally found willing, for their own sake, to give every possible assistance to the medical man under whose care they have placed themselves. Still, making all allowances, there is no doubt that here in Queensland phthisis occurs much more frequently without a previous case being ascertainable in the patient's family. This particularly applies to the native-born population, while amongst immigrants the family predisposition seems to play a more important rôle. These 200 cases, by the way, include only five children under 10 years of age. Every year the Australian born population increases in proportion to those who have come from other countries, and the increasing primary incidence of phthisis amongst the native born in spite of the apparent absence of hereditary taint is a serious factor. Cases of infection are not infrequent. This particularly applies to two classes of cases: (*a*) to young children where the parents, more especially the mother, suffers from active tuberculosis, all the five children above mentioned belonging to that class. Three of these children having contracted the disease from their parents succumbed to it before their parents. Secondly, infection has to be taken into account where a phthisical family history is reported in the collateral branch amongst brothers and sisters. Here I have seen instances where both parents were alive and saw their children being threatened with total extinction, one child after the other becoming affected. As a rule I found such cases to run a very rapid course; not exactly miliary tuberculosis, but rapid tuberculisation of the lungs within a few months. Two facts confirm us here in the assumption that infection was responsible: (*a*) the frequency of the occurrence amongst one sex, either brothers only or sisters only; (*b*) the stoppage of the epidemic as soon as the family was broken up, the house left, and the bedding destroyed. Instances in which the patient traces his illness to association with other consumptives are but few, and clinically, except amongst members of the same family, I have found infection to play but a subordinate rôle. How is it the illness arises apparently so often *de novo* in Queensland, while the transmission of the predisposition to the disease by inheritance is proportionately diminished? In my opinion the reason is this: Phthisis, amongst the favourable conditions of the Queensland climate which allows an outdoor life practically the whole year round, has the tendency to get better in a great number of cases than in the colder climate of European countries. A larger number of cases get cured, very often before they are married. In any case the children of such patients are not likely to look upon them as consumptives, or even know that they ever had been so, as pulmonary consumption even now is popularly looked upon as a necessarily fatal disease.

To summarise: The absence of a phthisical family history, especially amongst Australian born consumptives, is in many cases only apparent, the parents having recovered instead of having died from the disease, and the absence of such a history need not unduly weigh against diagnosing phthisis.

Inspection.—The dull percussion note in the supraclavicular and suprascapular region descending lower over one side than over the other has always been looked upon as one of the most valuable clinical symptoms of early phthisis. In doubtful cases it is sometimes convenient to return to the custom of our student days and mark the upper limit of the resonant lung sound with pencil, and only compare after both sides have been marked, thus excluding personal bias. In the diagnosis of the "cured" case of phthisis great stress should always be laid upon the comparative inspection on both sides of the suprascapular and supraclavicular portions respectively. The flattening of the upper and outer portion of the cucullaris on the affected side from behind and the retraction of the anterior region above the clavicle in in front show a difference often surprisingly distinct in proportion to the extent of mischief ascertained by percussion and auscultation.

Expansion.—Nearly every insurance company directs its medical examiner to note the expansion of the chest. Valuable as it undoubtedly is in many respects, it is of little assistance in the detection of early phthisis. I have noted down the expansion in most of my cases. Where the disease is limited to one apex the expansion of the chest amounts to between three and four inches unless there are pleuritic pains, which the patient instinctively wishes to avoid by shallow breathing. A difference of three to four inches between inspiration and expiration does not speak necessarily, therefore, against the presence of a tubercular lesion. I have seen an expansion of 3⅜ inches where both apices were affected.

Epiglottis.—We are, of course, all familiar with the characteristic appearance of pharynx and larynx in tuberculosis of the lungs, where the disease itself has not attacked the larynx specifically. What I wish to draw your attention to is the appearance of the upper surface of the epiglottis. In cases of phthisis the two sulci between the lateral and middle glosso-epiglottic folds are covered with dilated veins lying near the surface resembling in its ramifications a tree with its branches. In early cases of phthisis one or two little trees are seen making their way branching off to the right and left, rarely reaching the tip of the epiglottis in their course. Generally they are symmetrical, but sometimes they are more densely developed on one side than on the other. Where the infection is a symmetrical the more deeply infected half corresponds often to the affected lung. This, however, is not always the case. In far advanced cases of phthisis the epiglottis becomes sometimes so densely covered with these arborescent veins that there is hardly any free surface exposed near its basis. The cause of these dilated veins must probably be sought in the expiratory rise of intrathoracic pressure, which so frequently occurs owing to the repeated attacks of coughing. They are in a small degree due to the same cause as the subconjunctival breakages are in whooping cough, where, of course, the expiratory pressure reaches a much higher degree than in the ordinary cough of early and even advanced phthisis. These "arborescent veins" of the epiglottis do not possess, however, an exclusive diagnostic value in phthisis, as they are also found in asthma and chronic pharyngitis, but not so constantly. Of course they are in frequent occurrence in laryngeal disease proper, where they do not possess any pathognomic significance.

Smell.—I have often wondered that no text-book which is available to me makes any reference to the peculiar smell of the breath of phthisical patients. In conversation with other medical men, they also told me that they had noticed it. I cannot accurately describe it; it somewhat resembles the acetone-containing breath of diabetic patients, but can undoubtedly be distinguished from the latter. The smell does not arise from the skin; it arises from the breath. In some instances it is very strong. If a consumptive patient stays in a room with closed doors and windows for half an hour, the smell can be detected for a few hours afterwards, provided the room has remained shut up. Perhaps in our hotter climate the smell is more readily noticed than in colder countries. Latterly I thought that the smell was more distinct in those persons who at the same time took an abundant quantity of stimulants which, of course, is not infrequent amongst consumptives; but I am not sure about it. On the whole, the smell is more pronounced in cases of advanced consumption, but it is also sometimes very distinct where the disease is limited to a small area and little expectoration. The expectoration, when examined separately from the patient, does not give off a similar smell.

Concurrent Throat Affections.—A difficulty in the diagnosis of phthisis sometimes arises in the following manner:—A patient who is suffering from consumption, or has recovered from it, is, of course, not protected against other diseases. Sometimes a non-specific affection settles upon the throat, and may give rise to a great deal of cough which, under the circumstances, is naturally referred to the co-existing tubercular lesion in the lung, which latter is, perhaps, inactive. It is, therefore, of importance to examine the throat of every case of phthisis as a matter of routine. The following history illustrates the point:—6th Nov.—A.K.R., 37, engineer, eight years in Queensland, has been well until 10 months' ago when he contracted a severe dry cough. No blood spitting nor night sweats; lost a stone in weight; two sisters and one brother died from consumption. Patient 6 ft. ½ in.; weight, 154 lb.; phthisical habitus of chest. Right apex dulness reaches a considerably lower limit than on the left side, also tubular breathing over right suprascapular and supraclavicular region. No râles. Throat shows elongated uvula trailing on the tongue, also a number of granulations on the posterior wall of the pharynx. November 9th.—Uvula amputated. November 14th. — Granulations cauterised. November 18th.—Cough practically gone; weight, 158 lb. (a gain of 4 lb.). December 11th.—Cough quite gone; no alteration in the condition of lung. In this case the patient had obviously passed on some former occasion through an attack of tuberculosis of the right lung, from which he had recovered. The loss of weight, the persistent cough, the family history, led to the suspicion that the disease has made its reappearance. Although no râles were heard they might have been present and escaped notice through their deep situation. And yet the cough and loss of weight were simply caused by the local mechanical irritation of the throat. It must also be remembered that a persistent cough leads, as a rule, to harsh puerile breathing and prolonged expiration, although the lungs be quite free from disease.

Before the diagnosis of phthisis is arrived at and treatment resolved upon, all other co-existing affections must be eliminated by a thorough examination of the patient, and principally his throat. Otherwise it may happen that a patient with a latent phthisis is sent to a sanatorium where he would have an unusually good chance of contracting phthisis a second time.

MYOMECTOMY DURING PREGNANCY.

By E. T. Thring, F.R.C.S. (Eng.), L.R.C.P. (Lond.), Sydney

CASE I.—Mrs. W., *æt.* 29; married one year. Previous history unimportant. First seen October 23rd, 1901. Menstrual periods regular up to May, 1901; then ceased. Patient believes she is pregnant, and says that she has a "lump" on right side of abdomen, which causes some pain and inconvenience.

On Examination.—Heart, lungs, etc., normal; uterus pregnant about six months; to the right of uterus, and high up, is a hard, or tense mass, the size of a large orange, evidently attached to, or near the uterus, movable to some extent, but not freely.

Diagnosis.—Either tense ovarian cyst or uterine fibroid.

Operation, October 28th 1901.—Incision at outer border of right rectus over tumour, which was a pedunculated uterine fibroid attached to the right anterior part of fundus by a pedicle about 1½ inch in diameter. Tumour was removed, two curved incisions being made, one on either side of pedicle, thus forming two short flaps; vessels picked up and ligatured with fine catgut; edges of flaps joined by continuous catgut sutures; abdomen closed in layers. Patient made an uninterrupted recovery, and at term was delivered without trouble of a living child. No stretching of abdominal cicatrix.

CASE II.—Mrs. S., *æt.* 39; married 12 years; four children, the last one being 3½ years old; one miscarriage 2½ years after last confinement. Menstruation regular until 3½ months before admission to hospital, on November 27th, 1903. Some frequency of micturition, and pain beforehand. Patient complains of "a lump in her side," noticed about 2½ months ago; pain in it during past two months, also a somewhat rapid increase in size.

On Examination.—Uterus evidently pregnant between three and four months; fundus forward, rather high up and lying to the right of middle line; in the pelvis, to the left and behind, was a mass attached to the uterus, moving with it, and about equal in size to the body of the pregnant uterus. The mass could not be lifted out of pelvis, and would obviously obstruct delivery of fœtus through the pelvic outlet.

Operation, December 1st, 1903.—Under ether, incision through left rectus sheath, slightly to left of middle line. Fibro-myoma found wedged in pelvis, attached to lower segment of uterine body, and upper part of cervix behind and to the left, pushing uterus upwards, forward, and to the right. Incision made over tumour, which was shelled out; bleeding controlled by catgut ligatures and two rows of buried catgut sutures, which also closed raw surfaces left by enucleation of tumour; edges of incision brought together by continuous catgut suture; abdomen closed in layers. Patient made an uneventful recovery, and was duly delivered at term of a living child. No stretching of abdominal cicatrix.

CASE III.—Mrs. J., age 24. Admitted to Prince Alfred Hospital, June 3rd, 1904. Married five months; no previous pregnancy. Menstrual periods regular every four weeks, the last one early in March, 1904; nothing since. Shortly before this, *i.e.*, February, 1904, patient noticed a swelling in the lower abdomen; no pain.

On Examination.—Uterus enlarged, pushed upwards and to the left, the cervix uteri being on a level with the left pubic spine; the pelvis was filled by a soft, smooth tumour, upon which the uterus was lying, and to which it was attached.

Diagnosis.—Either large, soft fibro-myoma or adherent ovarian cyst; former most probable.

Operation, June 7th, 1904.—Under ether; incision through inner margin of right rectus sheath; large fibroid lying between layers of broad ligament on right side; uterus pushed up and to the left; about 3½ months pregnant; incision made through broad ligament, parallel to right round ligament, and between it and right Fallopian tube; tumour was shelled out. It was attached to the right posterior part of the cervix uteri, the feeding vessels being in close relationship to the uterine artery and right ureter. The vessels were ligatured with catgut, and tumour removed. Two layers of buried catgut suture closed incision into cervix uteri, and a continuous catgut suture closed the line of incision in broad ligament. Ovaries and Fallopian tubes were normal, and were not interfered with. Abdomen closed in layers. The patient made an uninterrupted recovery, and the pregnancy is now nearing the end of the seventh month.

CASE IV.—Mrs. B., *æt.* 40 years; married. No children or miscarriages. Is now, *i.e.*, January 20th, 1904, pregnant 6½ months. For about the last four weeks patient has had epigastric pain and discomfort, also tenderness on pressure; this is increasing. Temperature varies from 98·4° F. to 101° F. Menstruation before pregnancy was regular about every four weeks.

On Examination.—Patient a big, rather stout woman; heart and lungs normal; abdomen showed a large central tumour, reaching quite up to the costal angle; tender on pressure at upper part. The uterus was pregnant, and there was a tumour which could not be separated from the uterus, and which touched the under surface of the liver.

Diagnosis.—Either an intra-mural fibro-myoma of the uterus or hydatid of the liver, probably the former.

Operation, January 27th, 1904.—An abdominal incision above the umbilicus, through sheath of right rectus; tumour found to be a fibro-myoma, which was enucleated through an incision through the fundus and anterior surface of uterus. The deeper portion of the tumour was close down to the uterine cavity. Some vessels were tied, and the uterine wound was closed by layers of catgut sutures. Abdominal incision closed in layers; no drain. The uterus was manipulated as little as possible, apart from the incision and enucleation of tumour. Ovaries and Fallopian tubes being normal were not interfered with. The patient aborted about 36 hours after the operation. Fœtus, placenta, and membranes came away easily. As the uterus did not contract well, and there was a slight rise of temperature, up to 100° F., a curetting, under an anæsthetic, was done on the fifth day. Recovery after this was uneventful. On July 21st, 1904, *i.e.*, nearly six months after operation, patient was examined. Uterus a little larger than the usual normal non-pregnant uterus, freely movable; no pain or tenderness. There has been no menstrual period since the commencement of the pregnancy, *i.e.*, July 17th, 1904.

Specimen.—A fibro-myoma about the size of an ostrich egg, but somewhat flattened. On section, there were seen in several places signs of commencing cystic degeneration, and the microscope showed necrotic changes to have commenced.

CASE V.—Mrs. E., *æt.* 34; married; three children. The patient is rather stupid, and, as a consequence, her previous history is not very reliable. Was first seen by me on October 10th, 1904. Says she menstruated 10 days before this, having previously not done so for six weeks; before that she was "regular."

On Examination.—Abdomen showed signs of previous pregnancy. There is a central tumour rising out of pelvis, a little above pelvic brim. Bi-manual examination showed pelvis to be occupied by a round, firm mass impacted below sacral promontory; could not be lifted; body of uterus apparently pushed upwards and forwards in middle line; somewhat enlarged, but it was not diagnosed as being pregnant.

Operation, October 11th, 1904.—Under anæsthesia a sound was gently passed into uterus, cavity nearly 5 inches; incision made through right rectus sheath; pregnant uterus came into view; fibro-myoma filling pelvis and pushing uterus upwards and forwards. With some difficulty the tumour was lifted so far as to allow an incision to be made over it. Bleeding from large venous sinuses was free. Tumour rapidly enucleated, and bleeding controlled by catgut ligatures and sutures in layers. The tumour was attached by its principal vessels to the lower uterine segment and upper part of cervix. Ovaries and Fallopian tubes were left alone, as they were normal.

In this case, as there had been more manipulation than usual required, and the patient was unhealthy-looking and "flabby," a gauze drain was placed from Douglas' pouch into vagina, so as to allow serum to drain away.

It is now (October 18th, 1904) one week since operation, and the patient is making an uninterrupted convalescence. There has been no sign of a miscarriage. The pregnancy was apparently of about three months' duration, *i.e.*, judging by the size and shape of the uterus after the removal of the tumour.

Since writing the above notes about Case No. 5 certain untoward events happened. The temperature had been normal, and the patient apparently making good progress, when on the eighth day the whole abdominal incision opened up, and coils of small gut presented. An anæsthetic was given, and the wound again closed by through-and-through sutures of silkworm gut. There was no evidence of peritonitis, and the opportunity was taken to examine the line of suture in the uterus, where the myoma had been. This was soundly healed. The edges of the abdominal wound, which came apart, showed scarcely any signs of reparative action, only a few small patches of lymph. Subsequently to the second closure of the abdomen there was an irregular temperature, which has, however, now (November 1st, 1904), *i.e.*, just one month after the original operation, fallen to normal. The abdominal wound is soundly healed, and the patient looks well. There has been no abortion.

The above five cases are interesting from several points of view—first, the mortality is nil; secondly, they show a very considerable toleration of interference on the part of the pregnant uterus. Case 4 is the only one in which abortion occurred as the result of operation; and in this instance the pregnancy was of six and a-half months' duration, and there were also marked and apparently rapid degenerative changes taking place in the tumour. These were shown clinically by the patients' feeling of illness, pain and tenderness over the tumour, the rise of temperature, which suggested absorption of morbid products. The macroscopic and microscopic appearances of the tumour have been already referred to. There is no doubt that the necrotic changes which frequently take place in fibro-myomata of the uterus, after they have reached a certain period of development, are often accompanied by rises of temperature, pain and tenderness sufficient to suggest localised peritonitis. That this does happen in some instances is also true; but I have had one case in which there had been severe bleedings, and in which for three weeks before operation the temperature had varied from 99° F. to 104° F. At the operation no peritonitis was found, only serum in the pelvis, but there were marked necrotic changes in the tumour, as well as large spaces filled with fluid.

In this case—No. 4—it is scarcely probable that pregnancy could have gone on to term, as the symptoms of illness, *i.e.*, pain, tenderness, rise of temperature, were daily becoming more marked.

Thirdly, in Cases 4 and 5 the pregnancy is continuing without interruption, and there will be no obstruction to normal delivery when the time comes. Had the tumour been left, delivery *per vias naturales* could not have taken place.

Fourthly, Case 2 is a good example of the fact that normal delivery and complete recovery can take place after such an operation.

Case 1 is scarcely comparable with the other four, because the tumour would not have been an obstacle to normal delivery; moreover, it was pedunculated, which none of the others were. On the other hand, it is an example of operative interference with the pregnant uterus at seven months' gestation, *not* followed by premature delivery, and also shows that the scar of an abdominal operation wound only two months old will not yield to the strain of labour.

While I am by no means an advocate for immediate operation in *all* cases in which a uterine fibroid is found, I do believe that in *most* cases removal is the right course to follow, certainly if there are indications of degenerative change or excessive bleeding. But more especially do I consider that removal is called for in those cases in which pregnancy occurs, and particularly where the tumour is fixed in the pelvis and is likely to cause trouble during delivery.

I see in the epitome, *B.M.J.*, September 24th, 1904, that Pfannensteil's views as to the treatment of uterine fibro-myomata are given. He decidedly advocates operative treatment in the majority of cases, and especially in those in which there are *pressure symptoms and signs*, *excessive bleeding*, and where there is evidence of *degenerative changes* taking place, *i.e.*, cystic, malignant, or necrotic.

Very similar views were put forward by me in a paper on this subject which was read at the Brisbane Medical Congress in September, 1899.

(Read before the New South Wales Branch of the British Medical Association.)

LUMBAR HERNIA—WITH A CASE OF STRANGULATION.

By Charles MacLaurin, M.B. (Edin.), Hon. Surgeon, the Hospital for Women, Hon. Assistant-Surgeon Prince Alfred Hospital, Sydney.

Before proceeding to a critical study of the facts known in connection with this rare condition, I record the case upon which I operated. A girl, aged 20, was taken ill on September 3rd, 1900, with violent pain in the umbilical region and in the right loin. The stomach contents and a quantity of mucus and bile were vomited, and there was complete constipation. She had never suffered so before, and there was no history of illness.

She was very fat, most of the usual landmarks being obliterated, and little could be made out with certainty by examination. The temperature was 98°, the pulse 104; she looked ill, anxious, and collapsed. The right side of the abdomen was somewhat rigid. Over most of this area percussion was resonant, but in a portion of it the note was dull, and here a mass could vaguely be felt, on a level with the umbilicus and a little above the anterior superior spine. Hard, firm, fixed, and very tender, it appeared from the fatness of the patient to be intra-abdominal; it was about the size of a hen's egg. The rest of the abdomen was apparently normal, but distended. Rectal examination proved negative. The provisional diagnosis leant towards appendicitis or possibly strangulation by an internal band.

Operation, September 6th, 1900. Incision over mass, incising external oblique, partly through muscle, partly through aponeurosis. The body fat was about two inches thick. Beneath the external oblique the mass was now seen, and an incision was made into it, upon which there was no difficulty in recognising a hernial sac containing omentum and a loop of greatly distended small intestine, four inches long. The hernial ring was simply an opening in the transversalis and internal oblique fibres; its borders were soft and muscular, fortunately not gripping the intestine very violently; the ring admitted a finger very easily. The intestine looked suspicious, but not hopeless; reduction was impossible till the muscular border of the ring was nicked, when the intestine slipped in easily and was surrounded with gauze. The omentum was ligatured and removed. The peritoneum contained some serous fluid, and the appendix could be palpated from the wound, and was normal. Leaving a gauze drain around the damaged intestine, I sewed up the rest of the ring and the external oblique with formalin catgut. The bowels moved next day, whereupon the gauze was removed, and the wound healed aseptically, patient rising on the twenty-first day.

Ætiology.—Lumbar hernia is a rare condition, which appears to be little understood. Most of the English and American text-books simply state that it comes out through Petit's triangle; the best description to which I have access is in Tillmann's Text-Book of Surgery. Tillmann states that the ring may or may not be in Petit's triangle; he refers to the work of Braun and Julius Wolff, of whom the former collected 29 cases, 20 congenital and one traumatic. The more or less large openings in the latissimus dorsi, through which cutaneous nerves pass, may give exit to the hernia. Hartmann says there is a weak spot (the so-called upper lumbar triangle) in the upper angle of Petit's triangle, between the internal oblique muscle and the deep long muscles of the back, through which a hernia may protrude. Spinal abscesses may precede the hernia; and Petit has recorded a case where it seems to have been due to pregnancy. The above facts appear to sum up what is known concerning lumbar hernia.

One may divide these cases into two divisions—traumatic, and, for want of a better word, spontaneous.

Traumatic lumbar herniæ are also divisible into two classes, caused (*a*) by operation wounds; (*b*) by abscess. (*a*) Hernia following operation on the kidneys are much rarer than one would at first think, seeing how frequently these wounds are drained. The reason is probably that there is no neighbouring viscus which can conveniently descend. The large intestine is anchored with its short meso-colon. The kidney is normally somewhat securely fixed, and if it happen to be movable, it is too large and solid a viscus to take part in a hernia, except under most unusual circumstances. Again, the great mass of peri-renal fat would appear to act as an efficient buffer against any descent of the small intestine. I once saw a case of nephrorrhaphy by Jacobson's flap-splitting method, in which the kidney was so effectually sewn up that it partially protruded through the lumbar muscles. This may perhaps be accounted a hernia, but was obviously due entirely to the surgeon's hand. (*b*) Traumatic herniæ are most frequently due to suppuration. Lumbar abscesses usually arise from the vertebræ or innominate bone, the kidney, or the appendix. The first may creep along between the quadratus lumborum and erector spinæ, injuring the lumbar fascia, and pointing at Petit's triangle; the second may follow the same fascial plane lower down; the most common course for the third is to point directly on the skin below the ribs, or to burrow along the crest of the ilium, opening through Petit's triangle; while in the fourth case the pus may ascend behind the cæcum and reach the surface in the lumbar region, occasionally, though not necessarily, through the same triangle.

There are two features common to all these —(*a*) the lumbar fascia is injured; (*b*) the easiest route for the pus is then through Petit's triangle. For these reasons lumbar hernia following abscess usually appears through that opening.

2. *Spontaneous* lumbar hernia is a totally different thing. The statement that the ring is usually situated in Petit's triangle is incorrect, for the reason that the lumbar

fascia is there so dense and strong that no hernia can emerge through it unless through a traumatic orifice. We have seen that in abscess herniæ this fascia is injured, and it would take a great deal of evidence to prove that rupture usually occurs through so powerful a membrane when intact. Moreover, Hartmann's so-called weak spot between the internal oblique and the erector spinæ does not exist. There, on the contrary, the lumbar fascia is unusually strong; while the neighbouring viscera are the kidney and large intestine, which are anchored, and not likely to take part in hernia-formation. Braun, in my opinion, is on the right track in pointing to the nerve-holes in muscles as weak spots, but I believe him to be in error when he attributes the weakness to the latissimus dorsi. Braun fails to appreciate the great protective influence of the lumbar fascia, which is exceedingly dense beneath this muscle.

In my own case the ring was about two inches above and about an inch behind the anterior superior spine. It was three-quarters of an inch in diameter, and was situated in the fleshy sheets of the transversalis and internal oblique. The external oblique was not perforated. The ring was in the exact line where the lateral cutaneous nerves pierce the two oblique muscles, and these nerve-holes are frequently large, loose, and fatty. The opening of the transversalis is less easily accounted for. At first sight it is tempting to suppose a weakness at the junction of two body segments; but as a matter of fact the sclerotomes or intersegmental planes are usually stronger than the muscles themselves. There is no need, however, to go back to developmental error for an explanation. Large flat muscular sheets are frequently so ill furnished that the fibres can be separated without the slightest difficulty; it is not uncommon for them to be actually fenestrated, and this would appear likely to be the case in a transversalis whose super-imposed internal oblique showed large, fatty degenerated orifices for its cutaneous nerves.

The following conclusions seem warranted: (*a*) Lumbar hernia is either traumatic or spontaneous; (*b*) the traumatic hernia depends upon an injury to the lumbar fascia, and may commonly find exit through Petit's triangle. Its most common cause is abscess. Pregnancy is a rare cause. (*c*) Spontaneous hernia probably rarely emerges at Petit's triangle, but is due to fenestration of the transversalis coinciding with large and fatty apertures in the oblique muscles for the passage of the lateral cutaneous nerves.

Symptomatology.—A typical case, with a swelling in the loin, which shows the well-known features of hernia in general, presents no difficulty. The obscure cases are those in obese people, in whom the subjective symptoms of hernia are present; the dyspepsia, unwillingness to strain, constipation, etc., but no cause can be found. I would venture to hazard a suggestion that in such fat people there may be a slight occasional protrusion of intestine through a fenestrated transversalis, which rarely becomes strangulated, as in my case. Even when the hernia is of considerable size in these people, the diagnosis is difficult. In strangulation, the diagnosis, though all important, is not always easy, especially in fat people. Tillmanns states that several fatal mistakes have been made. My own case appeared very like appendicitis, and might readily have been allowed to go on too long; the strangulation was not, however, very acute.

Treatment.—The truss appears to be unsatisfactory, owing to the mobility of the part. Nor is operation to be relied on, as wounds in broad flat sheets of muscle form singularly weak scars. Where the hernia comes through Petit's triangle, attempts should be made to repair the lumbar fascia, wounds in which unite very firmly. When, however, the hernia protrudes in front of this aponeurosis, *i.e.*, directly through a fenestrated transversalis muscle, as in my own case, the chances of a cure by operation will probably be found small, though there are no statistics bearing on the subject. The fibrous scar tissue will probably be no stronger than the muscle itself.

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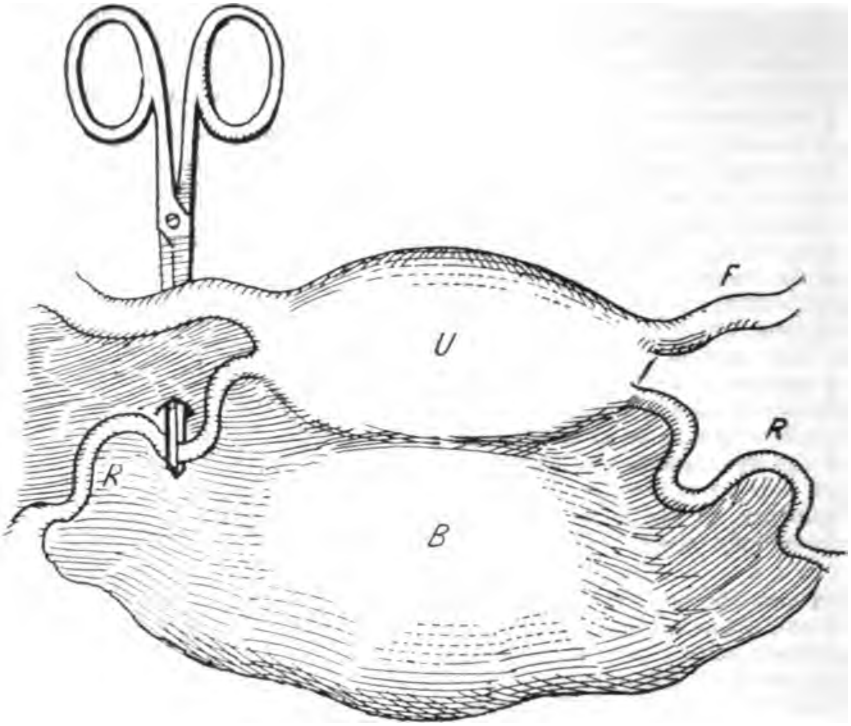

FIG. 1.

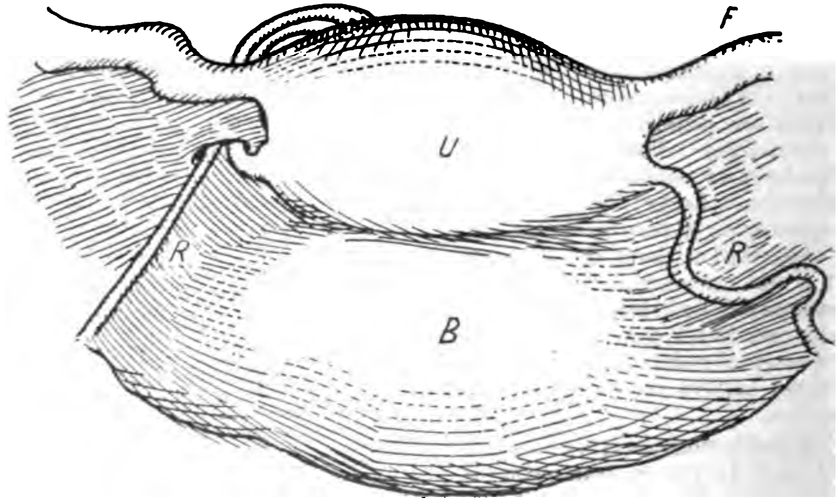

FIG. 2.

F—Fallopian. R—Round Ligament. B—Bladder. U—Uterus.

DR. EWBANK'S OPERATION ON THE ROUND LIGAMENTS.

ALEXANDER'S OPERATION ON THE ROUND LIGAMENTS OF THE UTERUS.

By W. W. Ewbank, M.R.C.S.E., etc., Perth, W.A.

SEEING Dr. McKay's article in a recent number of the *Australasian Medical Gazette* on the above, brought back old recollections and filled me with surprise, as I thought that this operation has been relegated to the realms of obscurity. It is many years since I did it myself, and then never with satisfaction. During a recent trip through Europe and America, seeing many hundred operations by numbers of the best men, I never saw this operation done or heard it commented upon.

It is possible to understand a man becoming wedded to an operation of this kind, especially when he has done it as often as has Dr. McKay, and it is possible that Dr. McKay gets better results than one who has done it less often ; but when Dr. McKay goes on to recommend the removal of ovarian cysts, etc., through the inguinal canal instead of through a median incision, I can't think that he will get many to agree with him as to the advantage of the proceeding. Still given that it is possible for a surgeon to prefer this inguinal route for the removal of ovarian cysts, etc., does it not seem bad preaching when one comes to consider the effect on students—(I presume that Dr. McKay as surgeon of the Lewisham Hospital has students under him) —does it seem wise to permeate them with these unorthodox views ?

What sort of a chance would a student have at an examination who recommended this method of removing ovarian cysts ? Taking into consideration the safety with which the abdomen can be opened nowadays, "with a fair technique," does it seem wise to break down adhesions, "possibly to the rectum," behind the uterus through the inguinal canal, when the whole thing can be done through a median incision, with the aid of sight ? A tear of the bowel or profuse hæmorrhage would probably often occur. Lastly, any method of shortening the round ligaments for retroflexion is not much use if there is any prolapse, which so often occurs, and in these cases a ventro-suspension is required as well.

For the sake of those who are inclined to my views rather than to those of Dr. McKay, I will describe a method of shortening the round ligaments through a median incision, which I introduced about four years ago. I described to it Howard Kelly when in Baltimore, and he did it and found it most satisfactory. Two men, Baldy and Webster, introduced an operation on the same lines about the same time, but I believe each severs the round ligaments.

To put it shortly, I introduce a pair of forceps through the broad ligament from behind, forwards, seize the round ligament about two inches in front of the uterus, draw this back through the hole in the broad ligament, and stitch the folded end to the posterior surface of the uterus about one inch down. This does not remedy any prolapse. If this exists as well, I do a ventro-suspension in addition. The position of the round ligaments behind the uterus now forms a sort of cradle for the organ to rock in.

I would like to congratulate Dr. McKay on the thoroughness with which he has gone into this matter, also on the lucidity of his description, and I can't help thinking a little more discussion on these matters in the columns of the *A.M.G.* would do good.

DENTAL DECAY AS A FACTOR IN THE PRODUCTION OF DISEASE.

By Louis Henry, M.D., Assistant Physician to the Alfred Hospital, Melbourne.

"ORAL Sepsis" is the title of a paper which I had the honour of reading before this Association in November, 1900. The paper contained the result of researches as to the origin of many pathological symptoms associated with the gathering of a large number of pathogenic organisms inhabiting the mouth. The paper was highly suggestive of effects produced remote from the entrance of infection, and my object in this contribution is to attempt to set out more in detail some of the clinical evidences which have come within my own experience in corroboration of my opinion that the mouth is an important portal of the human system in which pathogenic conditions may generate. Ancient medicine is replete with references to the preservation of the teeth, and artificial teeth were in use among the early Egyptians, Hindu, and Romans. Dentistry has made prodigious advances within the last 30 years, but its progress is more in the direction of direct treatment. The dental profession, as we observe it in our own midst, restricts its sphere of activity by leaving the prophylaxis of decay and the preservation of the natural teeth to be dealt with by ourselves. The duty devolves upon us, therefore, to struggle against an edentulous possibility, as degeneracy of the teeth clearly marks the deterioration of the race. Now, in contemplating our best forms of human beauty we expect to find white, clean, and well-arranged natural teeth, and we may even venture to assert that such teeth are essential to the ideal state of health. Great men of great mental power, leaders of great national movements, pioneers of enterprise, college athletes, possess good teeth. (It does not follow that we may not have prominent vitality, associated with firmness and determination, in individuals whose mouth does not reach the ideal standard.) The teeth, we may assume, should take the same rank in our estimation as the hair and the eyes. The vitality of all parts must be maintained, and no organ permitted to become decadent.

To understand some of the effects of dental caries we must seek out the causes of decay. The generally accepted explanation of one stage in the chain of causes is that bacteria producing lactic acid coming into contact with the enamel of the teeth dissolve out the lime salts, and so start the process of decay; then follows the destruction of the dentine, and ultimately the decomposition of the exposed pulp. The chemical analysis of the saliva may disclose abnormalities indicating nutritional disturbances, and so we find that physiological chemistry has discovered evidences of faulty nutrition (disturbance of normal metabolism) in the oral secretions. We obtain thus some explanation of the lowering of what we term high vital potentiality, quite sufficient to render the individual vulnerable and less protected to the invasion of disease-producing bacteria; organisms which, under conditions of normal nutrition, would find no culture ground, and would be harmless The chief source of nourishment of these micro-organisms are starchy and saccharine foods which are taken into the mouth. A mixture of white bread and saliva is an excellent culture medium to induce fermentation and lactic acid. The mouth and its secretions form a most prolific culture-bed for all kinds of bacteria, and it has been demonstrated that every form of bacteria finds its way into the oral cavity through the agency of air, dust, food and water, etc. It is fortunate for us that all bacteria are not disease-producing, for many play a very useful rôle in the economy of life. I believe many of them to be protective, and no doubt some, under proper dietetic conditions, may be valuable agents in acting as mouth scavengers in assisting in removing the *débris* of food deposited in the interstices of the teeth and elsewhere. The influence of bacteria in a beneficial way is familiar to you, such as the nitrification of the soil; by converting vegetable matter into suitable plant food; fermentation; and their uses in the manufacture of butter and cream.

The study of the phenomena of disease is always a complex one. Many ways exist in approaching an attempt to solve the problems of morbid vitality. The new science of bacteriology and its relationship to the causation of disease has revolutionised much, not alone in our views regarding the etiology of disease, but has also induced us to readjust our methods of prophylaxis and treatment. The territory of unexplored worlds is still great, and each newly-revealed chapter in biology compels an attitude of earnest thought in search of further truths. And so it seems that even as regards bacteriology we have to seek further afield for replies to deeper inquiries. Why, for example, are some constitutions susceptible to disease, and why are some immune? What is the explanation of the constitutional factor? What bearing has this factor on the vulnerability of the system to the invasions by the mouth of those micro-organisms which set up a necrotic inflammatory process?

A careful investigation into the origin of dental disease will show that general malnutrition of some kind is a chronic condition ante-dating the dental affection. We thus reach an important factor in provoking disease. Such a state of possibly unconscious impairment of the general health may prevail for a considerable period without evoking symptoms; but still, for all that, the vital potential of the individual is so lowered that he becomes vulnerable to the invasion of disease. I have all along taken up the attitude that bacteria only cause disease when the internal resistive forces of the organism are so lowered as to be unequal in defending the system from invasion. Faulty metabolism, imperfect nutrition, tissue starvation, auto-intoxication—all these may be regarded as the outcome of imperfect assimilation and imperfect oxidation, all of which have a tendency to induce lowered vitality and produce toxic waste products which accumulate in the blood, with the attendant sequelæ of depression of the power of vital resistance.

Our object should be never to relax in our efforts to do the utmost to strengthen the organism, to increase tissue resistance and cell potentiality, to improve the vital physiology, and to at once take decisive measures to inhibit all destructive and necrotic processes. An individual suffering from dental decay is constantly swallowing pus germs and infected food contaminated with mouth bacteria and their toxines. His symptoms are manifold, and are often expressed in manifestations far removed from the immediate source. I have within the last 12 months compiled a record of my out-patients' work at the Alfred Hospital. I have seen about 600 patients, with a visiting frequency of 2000 during that period. The cases consisted of the varied forms of gastric and intestinal disturbances, rheumatism of all kinds, anæmia, bronchial and pulmonary affections, enlarged glands, adenoids, disturbances of eye and ear, throat inflammations and neuroses. Over 80 per cent. of these cases were associated with dental decay in advanced stages. In each instance I imposed the removal of these septic conditions. Before relating a few cases I must explain that I am in the habit of using a nomenclature for recording the various forms of dental disease. Where the enamel alone is affected, I call this caries of first degree. Where the enamel and dentine are affected, this would be caries of second degree. Where the enamel pulp is exposed and is undergoing putrefactive changes, this is termed caries in the third degree. For pyorrhœa alveolaris, I put p. alv., and total absence of all teeth I write t.a. This is enough for all practical purposes. I intend to report but a few cases.

R.G.—Boy, 17 years, entered consulting room on crutches. Knees and ankles swollen; no temperature; general nutrition fair; tongue greyish coating, and most teeth decayed in the third degree; odour fœtid. Has had bad teeth for years and rheumatic symptoms for six years. Advised surgical asepsis (removal of teeth, etc.). Within three weeks the general symptoms disappeared and the boy was able to walk without crutches, and has had no relapse, six months afterwards.

S.F.—Merchant, 27 years of age, wasting rapidly; gastro-enteritis with dysentery; peripheral neuritis in both legs and feet; teeth, third degree; illness lasting eight months. After removal of septic conditions in the mouth, complete convalescence; weight increased, and patient able to resume his ordinary avocation.

H.J.—Sempstress, 31; emaciated; complains of cough; expectoration viscid; no tubercle bacilli, but quantities of streptococci. All teeth third degree and p. alv. Apex of right lung, percussion note higher than left, and expiration prolonged; fine moist râles; slight evening temperature and occasional night sweats and diarrhœa. After surgical asepsis and improved nutrition, and deep-breathing exercises, weight increased, other symptoms disappeared, and patient well enough to resume her work.

F.S.—Labourer, 29. Out of work two years. Thin and pale; complains of retching and inability to eat; pains over gastric region, and palpitations; occasional diarrhœa; teeth, third degree, severe. After removal of decayed teeth and suitable nutrition, health restored and resumed work.

T.D., 31.—Retired militia man, now clerk. Frequent tonsillitis, with abscess, incised three times within 18 months; left and right tonsils inflamed and occluding pharynx; abscess in each; two molars on each side of lower jaw, third degree; temperature, 103° F. After opening abscesses and treatment of mouth no further return of trouble.

D. G., *æt.* 19, domestic servant. Violent pains in head; can't lie down; no sleep; pains in left ear and eye; teeth decayed, upper and lower molars third degree. After attention to hygiene of mouth all symptoms disappeared.

I really need not trespass on your indulgence any further. These few cases have been taken indiscriminately from my case-book, and there are hundreds more if any further illustration is needed.

The next question that naturally arises is, What is the remedy? How to produce strong teeth? We must make a commencement with the child. It is a matter of the highest national concern that we should interest ourselves in educating the public in the matter of rearing children, especially in instructing parents as to the nature of the food necessary for the earlier months of child life. The survey should extend further, and periodical examinations made of the teeth of all school children. Most infants are born healthy, and it is, as a rule, that decay of the teeth and ill-health occur as the result of improper feeding. The teeth of children should receive more attention than they do. It is unusual to find healthy teeth in the mouth of a child brought up on one or more of prepared infants' foods. The builders of tissue must be contained in the food itself. The selective power of the protoplasmic cell is one of the marvels of physiology, and we should endeavour to stimulate the organism to maintain all parts in an equally healthy tone. While we supply the nutriment we may promote the strength of the parts by natural exercise—by mastication; the food administered should be of such a nature that it may be slowly and deliberately masticated. Such exercise insures a bountiful blood supply, and this maintains the preservation of the teeth and the shape of the jaw. When we consider the extremely complicated nature of food it seems wonderful how the protoplasm of the various tissues selects that which is necessary to nourish its particular part; given the food materials, nature does the rest. A very general custom which is prevalent among mothers is the administration of limewater. This is given to the infant for various disorders, and with the object of helping in the formation of bone and teeth. The effect of limewater, which is alkaline, is partly to neutralise the acid gastric juice, and so enfeeble it that the casein is curdled only by slow degrees. This is, however, an interference with the work of the stomach, and barley-water is to be preferred. The belief in limewater as a bone-former shows a lamentable chemical knowledge, because the lime required in food does not come from the water but from the solid particles of the food which we consume, and the lime in water has no influence in the processes of animal nutrition. The water consumed in the mountainous districts of Scotland is soft water, and Highlanders are not generally supposed to be deficient in either bone or muscle, and the tallest people in Great Britain are to be met in soft-water districts, for instance, in Cumberland and Aberdeen. The tissue builders are found in the cereals—wheat, rye, oats, and also in milk, fruit and vegetables. The artificial or medicinal addition of phosphates to food cannot make up the loss when the natural food is deprived of its normal mineral ingredients.

This illustration will serve to give some conception of the nutritional process resulting from the digestion of food. How the protoplasm of a bone selects that which is necessary to nourish the bone, the protoplasm of the hair, skin, teeth have each its own protoplasm selecting the nutriment needed for each particular part.

Now if you find an individual food deficient in lime salts, it will be found that the fixed bones, or those not receiving active use, become thin and wasted. The same argument applies to the teeth, which in their growth must necessarily deteriorate when nutrition is interfered with; and, as I have shown, malnutrition. both by lowering the personal resistance and also the cell vitality, is a predisposing factor in bacterial invasion.

In the process of making fine wheat flour the outside layers of the wheat kernel are discarded—it therefore is not any longer a natural food. The portions richest in lime salts, essential for building tooth and bone, are cast aside in order to make the flour appear white. Again, the use of steel rollers to grind and refine wheat instead of the older stone rollers,, which enable the fibrous parts to be retained, I presume assists in removing the mineral constituents of the wheat, and with the greater pressure, the nutritive constituents are also abstracted. The cell plasm is deprived of an important pabulum, and the altered food favours the growth and multiplication of those microorganisms in the mouth which intensify acid fermentation. This demand for white bread should be discouraged, especially for children, and substituted by a bread manufactured of a flour containing all its natural ingredients.

In conclusion, I would like to emphasise the necessity of paying attention to the condition of the teeth prior to any intestinal operation, as I feel assured that an aseptic condition of the mouth must influence the result of the operation in many ways. Among my own patients I advocate special attention to the mouth in all febrile cases.

The dental statistics gathered in Europe have revealed a very threatening condition of affairs. Over 40 per cent. of all teeth examined in children attending schools in Germany were bad. In England 75 per cent. of children examined had bad teeth. In the United States 95 per cent. of the children of the poorer class have carious teeth, and in the hospitals of New York it is stated that the diseases of the digestive organs which come from decayed teeth far outnumber those from all other causes put together.

(Read before the Victorian Branch of the British Medical Association.)

NOTES ON A CASE OF INTRACRANIAL SUPPURATION AND SEPTIC THROMBOSIS OF THE LATERAL SINUS OF OTITIC ORIGIN, WITHOUT ANY EXTERNAL EVIDENCE OF MIDDLE EAR SUPPURATION, PAST OR PRESENT.

By A. J. Brady, L.R.C.P.I., etc., Hon. Surgeon Sydney Hospital, Department for Diseases of the Ear, Nose and Throat, Sydney.

Cases of this kind are not entirely unknown in the literature, but they are sufficiently rare to warrant the record of such an one, particularly when the statement that there was an absence of middle ear suppuration can be verified by one accustomed to examining the ear When I first saw C., aged 60 years, in consultation with Drs. Linton and Graham, of Wellington, and Dr. Burkitt, of Dubbo, he had been ill a month. The history which I then got was that his illness began with a noise like escaping steam in the right ear. Earache and pain radiating into the right side of the face supervened. The hearing in the affected ear became dull. There was no discharge from the ear, nor was there a history of former ear trouble of any sort. He had always been strong and healthy. As there was evidence of middle ear inflammation, and possible suppuration, the tympanic membrane had, very properly, been incised, but no pus was found. When I saw the case the incision had closed, and there was no redness or other sign of active inflammation from the appearance of the drum, which was without reflex and of a dull leaden colour. The patient had been gravely ill for some weeks, with well marked symptoms of septicæmia-fluctuating temperature 99° to 104°, rigors, and sweating. Lately the right shoulder had become stiff and painful. The symptoms pointed strongly to septic thrombosis of the lateral sinus, which is a result of middle ear suppuration. The absence of middle ear suppuration was liable to throw one off the right track, but pointing to the ear as a source of infection, there were the history of severe pain in the region of the ear, dulness of hearing, an altered appearance of the drum, and some tenderness on deep pressure over the mastoid proscess. No swelling or alteration of the integuments was present. A careful examination by one of the colleagues at the consultation excluded other regions of the body as a possible cause of the symptoms. An operation was determined on. The mastoid antrum was opened and found full of pus. On removing the bone in a backward direction a large peri sinus abscess was evacuated. The sinus was thrombosed. The bone having been sufficiently removed to allow of dealing with the sinus, this was slit up and the thrombus removed towards the bulb till some fluid blood returned. The upper portion of the thrombus was now removed, and, as usual, a free gush of blood took place, washing all clot away. Bleeding was arrested by packing with a strip of iodoform gauze, and a separate strip was inserted towards the bulb. The patient stood the operation well, and everything looked hopeful for a happy issue. Unfortunately it was otherwise; from some particulars supplied to me by the kindness of Dr. Linton, it appears that although the symptoms of septicæmia were abated the patient became restless and had some difficulty in swallowing, and after some days succumbed.

In the absence of a post-mortem it is difficult to say exactly what was the cause of death. It would appear likely that there was some pressure on the medulla, whether from the extension of a septic meningitis to the base, or possibly a cerebellar abscess, which is sometimes found in connection with a septic thrombosis of the sinus. The symptoms before the operation were those of septicæmia, sufficient having been found to account for this in the large extradural collection of pus, and the condition, etc., of the sinus. Further exploration of the brain did not appear to be indicated at the time. The case is of importance in showing that pathogenic micro-organisms can find a track through the middle ear to the brain and its membranes, leading to the formation of pus within the cranium, while the middle ear remains free of a suppurative process.

NOTES ON A CASE OF BARLOW'S DISEASE.

By A. G. McGowan, M.B., B.S. (Melb.), Ballarat.

Charles F., aged 16 months, came under treatment for diarrhœa and vomiting in January of this year. He has been ill for about six weeks, and has become thin, fretful, and anæmic. He is quiet when left alone, but screams when moved, and especially when his legs are handled. The bowels act about six times in the twenty-four hours, the motions being greenish, and containing much mucus and occasionally some blood when he strains. He was breast-fed till eight months old, and since then has been fed wholly on boiled milk, boiled often for ten minutes, "to kill the germs," his mother states, and all kinds of farinaceous foods.

On examination the baby is emaciated and very anæmic, the skin being of a peculiar yellowish-white colour. His eyes are sunken, his face being pinched and wrinkled. The fontanelles are widely open and the sutures of the skull gape. The skull feels elastic and soft, but there is no cranio-tabes. The forehead is overhanging, with large and projecting frontal eminences. The cranium is flattened on the vertex, with prominent parietal eminences and a long antero-posterior diameter—in a word, a rachitic cranium. The dentition is greatly retarded, only about half a dozen teeth are visible, and these are much decayed. The gums are red and spongy, bleeding readily on the slightest touch. The ribs show the rachitic rosary, well marked, and the lower ends of the radius and ulna are enlarged. The abdomen is prominent, and distended with gas. The anterior surfaces of the legs, especially over each tibia, are affected with a brawny induration, which in parts gives a "boggy" sensation on pressure. The skin over the brawny parts is dusky and ecchymosed in patches, and is covered with a branny exfoliation. This condition has been present about two weeks, and commenced about the middle of the legs, extending upwards and downwards. The limbs feel cold, and there is no sign that would lead one to suspect that the swelling was cellulitic. The handling of the limbs appears to give the child pain, as he screams and tries to draw his legs away.

The shafts of the other long bones are unaffected, except for the swelling over the distal ends of each radius and ulna, which is evidently rachitic. A coarse rhonchus is audible all over the chest, and the heart sounds are feeble, but clear. Temperature is subnormal.

As regards the diagnosis, I based my opinion that the case was one of Barlow's disease, on the evident presence of rickets and the general condition of asthenia and cachexia associated with the spongy, readily-bleeding gums and the characteristic subperiosteal hæmorrhage, in this case affecting the tibiæ.

The symmetrical swelling over the tibiæ might be mistaken for a syphilitic periostitis, but the pain which the child suffered on any handling of the limbs rather contra-indicates this assumption. There was an absence also of any concomitant signs of syphilis, and, as a post-hoc diagnosis, the manner in which the child improved without anti-specific treatment shows clearly that it was non-syphilitic. At first I considered whether the swelling of the legs might not have been a simple anasarca, but the localisation to the front of the limbs, the peculiar, brawny feel, and the ecchymosis of the skin negatived such a diagnosis and pointed to a subperiosteal hæmorrhage, which, in conjunction with the other signs, gave a fairly typical clinical picture of scurvy-rickets, of which the diarrhœa and vomiting was a complication.

The cause of the disease in this case was, undoubtedly, improper feeding with over-boiled milk and excess of starchy foods. The milk was often boiled for ten minutes, and this was the potent factor in the causation of the complaint, for it is well recognised that the boiling even for a few minutes of fresh milk causes a precipitation and consequent loss of the organic acids and salts to a large degree, and thus the invaluable anti-scorbutic elements of fresh milk, so important dietetically to the growing infant, are removed.

The excess of farinaceous foods also aided the milk in producing the disease.

The treatment adopted was as follows:—The diarrhœa and vomiting yielded readily to the usual dietetic and medicinal measures. Then the child was put on fresh unboiled milk, whey and raw cream, raw meat juice and gravies, and in addition two teaspoonfuls of lemonjuice were given during the day, and he was allowed to suck cores of ripe oranges, which he did with avidity. Later on there were added to the dietary mashed potatoes with gravy, broths flavoured with vegetables, yolks of lightly-boiled eggs with bread crumbs, and, finally, scraped and pounded raw meat in small quantities. Medicinally he was given limewater two drachms a day, and afterwards Fellows' and Easton's syrup in small doses.

The baby's general condition improved in a most satisfactory manner, and when I last saw him about two months ago he was fat and rosy. Dentition was proceeding satisfactorily, and the fontanelles and sutures were less open. The legs were normal in size and shape, though there was a slight tendency to bowing of the tibiæ; but he was too fat to determine if he still possessed the rachitic rosary.

(Read before the Ballarat District Branch of the British Medical Association.)

PERSONAL EXPERIENCES OF SOME DRUGS, OLD AND NEW, IN THE TREATMENT OF DISEASE.

By Patrick Kennedy, L.M. et L.K.Q.C.P.I.; L.R.C.S. (Irel.), Albury, N.S.W.

In the following notes I have given my personal experiences of the drugs mentioned. In doing so I would mention that I made no pretentions to be an authority on therapeutics. If what I have written should prove of help to any of our members I shall be satisfied.

Acetozone.—Besides using this in the disease for which it was introduced—typhoid fever—I have used it in the dry tongue and typhoid state in pneumonia. It had an admirable effect on this condition. It made the tongue moist and so added to my patient's comfort by lessening the thirst. I have usually given an ounce to two ounces of a gr. v. to gr. vii. solution to the pint of boiled water. I have also used it for suppurating wounds with very good effect. In one case of hæmatoma of the labium after labour, which ruptured, I applied it and had no suppuration. I have also used it in gonorrhœa with good results. It seems to alter the character of the secretion and restore it to the normal state.

Alumnol.—An aluminium salt of napthol sulphonic acid. I have found this very useful as a non-poisonous application in fissured nipples during lactation. I usually order it with bismuth subnitrate, the proportion of one dram alumnol to two drams of bismuth subnitrate and glycerine to two ounces. I also used it with good effect in herpes of the tonsils, one dram to two ounces aq., to which I add gr. iv. cocaine and mx. glyc. carbol. I apply this on a long-handled swab of cotton wool, which I rub over the patches, lightly at first, and again more firmly in three or four minutes. This detaches the thickened secretion and enables the iron perchloride and hyd. perchloride mixture, which I administer at the same time, to come in contact with the diseased surface. Cases so treated I find do well in two or three days. The method of application is an important factor in the treatment.

Aspirin.—The recently introduced substitute for the salicylates I have found very satisfactory. It does not cause the noises in the ears nor the same miserable feeling as the salicylates. It has one drawback, viz., its tendency to cause profuse sweating; this I have found occur mostly in anæmic people. The dose recommended is gr. 15 to gr. 30 every three hours. I find it better to commence with smaller doses of gr. 8 to gr. 12. I have found it very useful as a diaphoretic in influenza, in which it also relieves the supraorbital and occipital neuralgia, which has a tendency to recur every afternoon. I have had good effects in pleurisy, with or without effusion. Many of these cases seem to be rheumatic in their origin. In rheumatic joint affections I have found that cases do better on aspirin than salicylates, and *vice versa.* It is a question whether the kidneys ought not to be watched for nephritis when giving aspirin or salicylates. I have found albumin in the urine a few times. A similar effect may be noted as an after effect of the administration of trional and sulphonal.

Apocyanum Cannabinum (Canadian Hemp).—This I have found very useful as a diuretic in cases of Bright's disease and cardiac affections with ascites and œdema. I suppose most of those present know how difficult the management of these cases is, and have often been at their wits end for something fresh to try when old and well-known drugs have ceased to have effect. I would recommend you to bear this drug in mind in these cases. I use liquid extract in doses of five minims to ten minims t.i.d. In some cases it acts freely on the bowels in small doses, so that it would be well to try the small dose first. As far as I can judge it has a vaso-dilator action, which is shown by a slight action on the skin.

Aristol.—This is a thymol iodine compound introduced as a substitute for iodoform. I have found it very useful as a cicatrisant in burns. I use it as a ten per cent. ointment, which I have found remarkably efficacious. It has lately been recommended as an insufflation into the orifice of the antrum in cases of ozœna.

Boracic Acid.—I have found this act very well to counteract alkalinity in cystitis. It may be given in solution in 5 grains to 7½ grains with any sedative such as hyoscyamus, or in powder with resorcin and salol. Besides its well-known uses externally, I have found the addition of chloretone, one to four of boric acid, acts remarkably well. I recently had a case of ulcer in the anterior wall of the vagina in an old woman of seventy. In appearance the ulcer might have been an epithelioma or of a specific nature. It caused agonising pain, which was relieved, and the ulcer healed in about ten days.

Boric acid may cause a troublesome papillary skin rash.

Lactic Acid.—I put this down with boric acid, which I find very useful as a urinary acidulant. I usually give five minims of the acid lactic. As an acidulant its action is prompt and it causes no rash.

Chloretone.—This I have found very useful in cases of vomiting of an intractable nature. It is serviceable in preventing the after vomiting of chloroform administration. When given before the administration of chloroform it causes a very deathly appearance and a most unusual quietness in the patient, which is rather alarming to one using it for the first time. For vomiting I usually give 5 grains with sugar; for chloroform vomiting more may be given. It also seems to have a hypnotic action.

Chloroform.—I know that there is in the profession a sort of fetichism for Duncan and Flockhart chloroform, due, I fancy, to a fear of the coroner. I have used both Geh's and Merck's chloroform, principally the latter, for six or seven years with excellent results, and no deaths so far, and with the additional advantage of costing about 2s 6d per pound, as against 7s 6d for Duncan and Flockhart.

Guiaiacol Carbonate.—I saw this recommended as of use in pneumonia and broncho-pneumonia. It causes a very rapid reduction of temperature and seems to shorten the duration of cases. The dose recommended was 5 grains every third hour. I would advise anyone trying it to begin with gr. 2 to gr. 3 every third hour, with instructions to watch for reduction of temperature.

Solution of Hydrogen Peroxide (10 *vol.*):—I have used this drug for about ten years in pneumonia, broncho-pneumonia, bronchitis, and chronic asthmatic conditions. I give from one to two drams every second or third hour, according to the urgency of the dyspnœa. My prescription is:—R. sol. hydrogen perox., 1½ oz. to 3 oz.; glycerine, 3 drs.; spt. chlorof., 1½ drs.; aquæ, ad. 6 oz. Half an ounce every second hour or third hour according to the urgency of the dyspnœa. In dealing with my cases I first bring down the temperature by aspirin, or the guiaiacol carb., and then begin the administration of the peroxide as above. Its action is remarkable in the comfort of the patient. The number of respirations is lessened and the hunger for air is not pronounced. In its actions it seems to supply oxygen to the blood, and the pneumonic aspect disappears, though all the physical signs remain, such as dulness or percussion, and various physical signs, and it has seemed to me to have a tendency to prevent heart failure. It unfortunately does not agree in every case; some patients are made sick by it and cannot be got to take it, but the majority take it well and continuously. I would ask the members present to give this drug a trial, and feel certain they will be pleased with its effects. I just saw its use recommended in the *New York Medical Record* by Dr. Green, of Denver, Colorado, about ten years ago.

Musk.—I have found this useful in a few cases, but its price of sixpence to a shilling a grain is prohibitory. I have used it in hiccup, very severe and prolonged, with great relief, when nothing else that I could think of gave any relief. I have also used it in pneumonia in the failing stage; it seemed to be a help to the failing powers. If one had a wealthy patient it might be tried on a more extensive scale.

Ovarian Substance.—I have found this very useful in the flushings and various nervous disturbances at the change of life.

Cocaine.—I have frequently found it of great use in severe vomiting, with bismuth. In the liq. bismuth, in cases where bismuth alone did not act, I have given from one to a quarter or even a half grain every third hour, frequently with satisfactory results.

An Opiate.—I usually use nepenthe, or occasionally capsule of Dover's powder. I find these cause less after effects, such as headaches and sour stomach. I mention this as I would like to know the experience of other members as to opiates, or rather their after effects.

Theocin (Theophyllin).—This I have found to be very active diuretic. I have given it in doses of three grains three times a day, and gradually increased the dose to five or six grains. It is more effectual in cardiac dropsy than in renal.

Glycerine.—I have used this internally in half ounce doses for the relief of gallstone colic in mild cases. It acts very well and may save a patient from taking morphia. When ordering, use pure glycerine free from lead.

Tinct. Valerian Ammoniata.—I have found this very useful in flatulent distension of the stomach. I order it thus:—T. Valer. Ammoniat., 2 oz.; Ol. Anisi, gtt. 4. Dose 15 minims to 40 minims, ex. aq. every hour or half-hour for wind.

Serpentary.—Garrod recommends serpentary and guaiacum as prophylactics for gout.

I have used serpentary for this purpose, and I found that it had a slow and prolonged vasodilator action. I tried it in other cases that I thought might benefit by this action, such as neuritis, possibly of gouty origin. In some cases it seems to cause a tolerance of iodine given internally in patients otherwise intolerant of it. In cases of amenorrhœa in young girls where seemingly the pelvic organs are not fully developed it acts very well. In one case of contracted kidney with neuritis and a presumption of alcoholism it relieved the high tension pulse and the neuritic pains, and the patient said it was a very good stimulant. As an aid to exercise, if any of you will take half a dram of the liq. serpentariæ co. conc., I think you will find that you can climb a hill better than usual. It has an unpleasant bitter taste. I usually prescribe it thus :—R. liq. serpentariæ co. conc., 1 oz. to 1½ oz. ; liq. sarsæ. co. conc. ad., 4 oz. Mft. mist. dose, two drams in half oz. t.i.d. The bitter taste is not noticeable in this mixture.

Sodæ Salicylate.—In prescribing this I usually add to it tr. gent. co., which takes away the mawkishly sweet taste of the drug. It has seemed to me that I get a good effect with small doses, say 7½ to 10 or 12 grains. I usually order with it ex. of ergot and sodii bromidi, which seem in many cases to prevent the noises in the ears and that miserable suicidal feeling which so often occurs during the administration of salicylates. To any of you who may have to deal with throat coughs, possibly of rheumatic or gouty origin, which is shown by a relaxed and slightly œdematous uvula, and a pink coloration of the soft pallet covered with white points, I would urge to add sodæ salicylate to your prescription. I have found that the addition of an opiate to sodæ salicylate gives great relief in rheumatic painful affections, such as sciatica and lumbago, and the combination seems mutually antagonistic to the bad effects of each drug.

Mesotan.—I have used this in rheumatic affections, in a few cases with good effect. It is used with equal parts of oil and painted over the seat of pain.

(Read at the meeting of the Border Medical Association at Wangaratta.)

The Society of Medical Jurisprudence of New York is urging that quack doctors should be prosecuted, as there are 20,000 in New York alone. The diplomas of deceased doctors are frequently sold by auction.

EXPULSION OF FÆCES FROM CHILD'S MOUTH AND NOSE DURING DELIVERY.

By A. W. Esler, M.D., M. Ch., M.A.O., Williamstown, Victoria.

I WAS called at 4.30 a.m. on August 23rd, 1904, to attend Mrs. B., aged 28 years, a small, but strong and healthy woman, in her first confinement. She had calculated to be laid up eight or ten days earlier.

On examination I found a head presenting in first position, the os three quarters dilated, and the membranes ruptured. There was a fairly free discharge of fresh blood from the uterus. The labour pains were of moderate strength, but short duration. The patient had taken liquorice powder, and her bowels had acted freely, and occasionally with a pain there was an expression of brownish semi-liquid fæces. Matters progressed slowly till 6.50 a.m., when the uterus becoming less active, I decided to deliver with forceps. On re-examination I was surprised to find a free discharge of fæces of a light, gruelly colour and consistency escaping with the blood from the vagina. I gave a deep injection of ergotinin citrate, gr. $\frac{1}{10}$, and douched out the vagina with a weak hot solution of lysol, and applied the forceps, at the same time allowing the patient to inhale enough chloroform to quieten her. As the child was being slowly delivered, there was a gush of fæcal matter ; I think there was at least a pint; the nurse thinks there was more. When the head was born fæces continued to escape from the mouth and nose. As the baby's eyes were full of the filth, I immediately bathed the eyes and head. The next pain completed the child's birth, more fæces escaping from the mouth and nose. When delivery was completed, I had to clean out the mouth and squeeze the nose, which was quite blocked up ; the body, too, was smeared with the excretion.

The child was a male, and with a napkin tied round him weighed 9½ lb. He was in every way a fine baby. Three hours after birth, *i.e.*, at 10 a.m., he vomited about 3 dr. of fæcal fluid, with the characteristic smell ; at 2 p.m. he vomited one ounce, with less odour, and at 3 p.m. a trace. At 8 p.m. the nurse gave him a dose of castor oil, which he vomited immediately, without any sign of fæcal matter.

The third stage of labour was very troublesome on account of continual hæmorrhage and difficulty in expressing the placenta : as the placenta was born there were traces of fæcal matter. I finally gave an intrauterine douche of very hot weak lysol solution and repaired the perinæum, which had been torn by the shoulder, by three catgut sutures.

The nurse told me that the first time the child's bowels acted the motion had the usual meconium appearance. There was nothing unusual in the after events; everything progressed most satisfactorily.

In 18 years' constant association with midwifery work, this is the first case of the kind I have met with.

(Read before the Victorian Branch of the British Medical Association.)

CLINICAL AND PATHOLOGICAL NOTES.

CASE OF ATROPINE INTOXICATION.

The patient was a man of 81 years, who had had an iridectomy in both eyes for glaucoma some years ago. Vision is now simply P.L. When I saw him he had iritis of left eye with altered colour of iris, and well marked circumcorneal injection. Tension was normal in both eyes. Hot fomentations were tried for a day, but did not relieve the pain. I then ordered atropine drops (gr. 2 to 1 oz.) to be used two or three times a day.

On the second day after this the eye was much better, but the patient was restless and delirious most of the night, and complained of dryness of the throat, and difficulty in passing water. At one time there was retention for about 16 hours, and I thought I would have to use a catheter. Previously to this, the patient had been passing water every two or three hours.

The atropine instillations were stopped, upon which these symptoms immediately subsided, but the eye became injected again. I then prescribed drops of half the strength (gr. 1 to 1 oz.), and gave directions as to how to prevent the tears entering the nose after instillation of the drops. In spite of this, the delirium returned the first night after the drops were recommenced, and it was necessary to stop the treatment. The eye, however, was fairly well by this time.

This case may be of some interest in illustrating what an exceedingly minute dose of atropine will sometimes produce toxic symptoms, especially in the aged.

Sydney. Richard Arthur, M.D.

APPENDICULAR COLIC ASSOCIATED WITH DEEP-SEATED CERVICAL ABSCESS.

A case, somewhat obscure in some particulars, has recently come under my observation and may be of some interest to medical men.

Mr. B. W., *æt.* 24, consulted me on the 28th day of last August, complaining of a slight pain in his neck on the left side, and also a slight pain in his right groin. There was no rise in temperature, and upon examination the neck was found to be slightly tender over the centre of the sterno-mastoid muscle. No swelling was perceptible. An examination of the abdomen discovered a tender spot on pressure over McBurney's point. Upon inquiry I elicited the fact that he had for three or four months, at intervals, a pain of a colicky character at that spot in the abdomen, but never sufficiently severe to confine him to bed or to compel him to seek medical advice. There had been no previous trouble in the neck.

On August 31st he again consulted me, complaining of a severe pain in the neck and some difficulty in swallowing. He then had some swelling on the left side of the neck, but no redness or fluctuation. He still had some pain in the abdomen, but not of an acute character. He had no vomiting. His temperature was 100° F. I suggested to him the probability of appendicitis, and also abscess in the neck. He was then admitted to my hospital.

On September 1st his temperature went up to 102·5°, and a very persistent "brassy" cough developed, which would scarcely allow him a moment's rest. There was no expectoration. Tongue was very much coated: bowels were open. Morphia, hypodermically, was given to relieve cough. The cough very much resembled that sometimes met with in aneurism of the arch of the aorta, through involvement of the recurrent laryngeal nerve.

On September 2nd there was still no fluctuation, and as there was a faint blush over the whole area, and the swelling was increasing, I decided to operate in the anticipation of finding pus below the deep cervical fascia. Under chloroform an incision was made in front of the sterno-mastoid muscle and on a level with the cricoid cartilage. Two and a-half inches of the carotid sheath were exposed, and it was not until the sterno-mastoid was separated from underlying structures, almost down to the clavicle, that some foul-smelling pus, about an ounce in quantity, accompanied by gas, was discovered. This abscess must have been perilously near finding its way into the superior mediastinum and also the apex of the left lung. A free counter opening was made immediately over the clavicle and behind the sterno-mastoid muscle. He had immediate relief. Temperature soon came down to normal. The discharge was copious, necessitating the dressings being changed every two hours, and most offensive, resembling in every particular that from an acute appendicular abscess. The cellulitis became very extensive, involving almost half the neck. Recovery was uneventful.

During convalescence from the above affection the patient at intervals still complained of the pain in the region of the appendix, and the question arose as to whether the abscess in the neck could possibly be secondary to a diseased appendix.

The solution of this problem, I thought, could be best made by the removal of the appendix. This I accordingly did on the 22nd day of September in the usual way. There were no difficulties encountered in its removal. It was about six inches long, very much kinked about its centre, and presented no signs of inflammation on its peritoneal surface. On opening it longitudinally there escaped a small quantity of muco-pus, a small substance resembling a portion of a tea-leaf, and ten living thread worms. He made an uninterrupted recovery, and has since been free from pain.

Now, as to etiology. The cervical abscess, though no bacteriological examination of its contents was made, I would say undoubtedly contained the bacterium coli commune. The bacterium did not gain admission from the teeth, since they gave him no trouble at all, nor was there any evidence of throat affection. Then, as to the upper air passages or the œsophagus being the possible cause of trouble by some foreign body finding its way from them, such as a fish-bone: here, again, no clue could be found. Is it possible that it could be secondary to an appendix whose serous covering showed no evidence of present or recent inflammation ? I think not.

Then as to the persistent severe cough, relieved immediately by the operation: was this cough due to the proximity of the abscess to the larynx or to the apex of the life lung, or to pressure on the recurrent laryngeal or the phrenic nerves ?

With regard to the colicky pains in the appendix, could the thread worms, aided by the kink in the appendix, be responsible for them ? And, if so, is not this an unusual cause of colic ?

An opinion on these points by some of my professional brethren would be much appreciated.

FREDK. MORETON,
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Warrnambool, Victoria.

MIRROR OF HOSPITAL PRACTICE IN AUSTRALASIA.

HOSPITAL FOR SICK CHILDREN, BRISBANE.

A CASE OF ACUTE TETANUS.

(Under the care of Dr. Wield, Hon. Medical Officer.)

Reported by Dr. Lucy Gullett, House Surgeon.

E.G., *æt.* $1\frac{9}{12}$ years, was admitted 9.30 p.m., May 15th.

History.—Had crushed fingers in chaff-cutter at about 5 p.m. that day.

On Examination.—Second and third fingers of right hand crushed; injury slight; had bled freely before admission. Hand dressed with hot boracic fomentations every three hours; soaked in 1 in 5000 perchloride at intervals. As hand looked very healthy, and as it seemed that both fingers might be saved, operative treatment was delayed.

May 17th.—As hand didn't look so healthy, child was given anæsthetic at 10 a.m.; fingers well scrubbed with 1 in 2000 perchloride; two or three pieces of bone removed and stumps sutured. Child took chloroform well. Somewhat cross and fretful for rest of day.

7 p.m.—Nurse reported that child was screaming loudly; colour bad and pulse poor. I saw her a few minutes later and found her lying collapsed. Pulse very poor. Did not seem conscious. Soon afterwards had another attack of crying, back became arched, head much retracted, colour bad, pupils small, nostrils widely dilated; mouth opened, but jaws appeared rigid; abdominal muscles rigid. Attack lasted about one and a half minutes. Choral hydrate gr. x and pot. brom. gr. xxiv were immediately given, and, tetanus being diagnosed, 50 c.c. of Pasteur's anti-tetanus serum. Child had four or five similar attacks. There was no twitching and no real convulsion, only crying and rigidity. Soon afterwards chloroform was again administered, and both injured fingers

were removed and free incisions made in the hand. Child required very little anæsthetic. Recovered consciousness soon afterwards. Moaned at intervals for some time, but had no distinct attack until shortly before 11 p.m., during which she died.

Typical tetanus drumstick bacilli were found in culture made of specimen taken before second operation.

The case seems worthy of report on account of the short interval, not quite four hours, which elapsed from the first symptoms until death supervened.

A former case treated in the hospital, in which the symptoms were much more severe, lived nearly 13 hours after the onset of the attack.

REVIEWS AND NOTICES OF BOOKS.

OPERATIVE GYNÆCOLOGY. Hand-Atlas Series. By Oscar Schaëffer. Edited by J. Clarence Webster. Philadelphia: W. B. Saunders & Co. Melbourne: Jas. Little. Price, 15s.

This book may be labelled Extract of Gynæcology. It contains a huge amount of information, greatly compressed; and a German trying to write pithy sentences is like a rhinoceros trying to stand on his head. Even Dr. Webster, with his usually lucid and clear English, has not been able to render many paragraphs intelligible without considerable mental struggles to discover whatever Dr. Schaëffer is driving at. (This sentence is an instance of the awful result of too much Schaëffer). Seriously, however, it is a very good little book, and in most cases thoroughly up to date and surprisingly full of detail. The pictures are of course well done and clear. Curiously enough there appears to be no description of the operation of intra-abdominal shortening of the round ligaments. We can strongly recommend this little treatise. C.M.

THE TREATMENT OF FRACTURES. By C. L. Scudder, M.D. Philadelphia: W. B. Saunders & Co. Melbourne: Jas. Little. Price, 25s.

In the treatment of fractures we now, apparently, stand at the parting of the ways. On the one hand we have the French surgeons with their immediate massage and practical abolition of splints; on the other, we have the old system of long immobilisation and rest. No book on fractures can be considered complete which does not critically examine the evidence for each of these methods, and it is surprising to find that Dr. Scudder, so far as we have seen, does not even mention the new practice. He has paid vast attention to splints, extension, and similar aids to immobility, but he does not appear to have considered the effect of immediate massage on fractures at all. The experience of the present reviewer is that no one who has once treated a fracture by anæsthesia, accurate setting, and massage from the second day would ever willingly return to the old plan. Dr. Scudder recommends "gentle massage" to fingers, wrist and forearm of a Colles' fracture at the end of eight days. This is not, in our experience, so satisfactory as the French method, under which even a severe Colles' fracture becomes practically normal in four weeks, a result which can be claimed for no other method. Otherwise, Dr. Scudder hardly mentions the use of massage at all. To those who wish to learn all about splints, displacements, and such like things, Dr. Scudder's book will be very useful. What one may call the theoretical part of the work is, though condensed, very well done indeed; but we must certainly express our opinion that much of the practical part is nowadays out of date. C.M.

AN AMERICAN TEXT-BOOK OF SURGERY FOR PRACTITIONERS AND STUDENTS. Edited by W. W. Keen, M.D., and J. W. White, M.D., Ph.D. Fourth edition. Price, 33s 6d. New York, Philadelphia and London: W. B. Saunders & Co. Melbourne: James Little.

The list of authors includes a number of well-known names—names which in themselves are a guarantee that many of the articles contained in the book will be well worth reading. The preliminary chapters on Surgical Bacteriology and kindred subjects are necessarily short, but yet sufficiently clear to allow the general practitioner to become conversant with the more recent work in this particular field. After giving detailed methods for the sterilisation of catgut, two authors are quoted who state that such catgut when buried in the tissues and removed after a few days invariably contains organisms. This is certainly disconcerting to the inexperienced, and is apt to induce him to neglect his aseptic and antiseptic precautions as being so much waste time. The book is, however, on the whole a work of great merit, and can be recommended as a sound surgical book of reference for the student and the practitioner. H.C.H.

MANUAL OF PRACTICAL MEDICAL ELECTRICITY. By Dawson Turner, M.D., F.R.C.P. (Edin.) Fourth edition, 1904; with 200 illustrations. London: Baillière, Tindall & Cox. Sydney: L. Bruck. Demy 8vo.; pp. 435. Price, 10s 6d net.

This work has been thoroughly revised and enlarged, and is now presented in its fourth edition. As in the former edition, it is divided into six parts, and each of the latter subdivided into numerous chapters. Part I. deals with Electro-Physics; part II., Electro-Physiology; part III, Electro-Diagnosis; part IV., Electro-Surgery; part V., Electro-Therapeutics; and part VI., Röntgen X-Rays. More attention has been paid in this edition to the use of sinusoidal currents in treatment, and to the employment of the multiple static machine in Röntgen-ray work. Part VI. has been rearranged and expanded, and a section on the radiations of radium and their mode of application has been added. The physics, physiological effects, and therapeutic uses of high-frequency currents have been collected together, and are dealt with at greater length in a separate chapter. More than thirty illustrations have been added; the blocks, however, dealing with X-ray subjects are not as clear as they might have been, and one is even reproduced upside-down.

This manual is so well known to the profession that little comment is needed, and every practitioner and student desirous of gaining an elementary as well as a concise knowledge of electricity from a medical standpoint should certainly avail himself of reading this most valuable work. L. H.

THE AUSTRALASIAN
MEDICAL GAZETTE.

SYDNEY, 21ST NOVEMBER, 1904.

PATENT FOODS AND PATENT MEDICINES.

DR. ROBERT HUTCHISON, the author of the well-known book "Food and the Principles of Dietetics," has recently published in pamphlet form two lectures on the subject of "Patent Foods and Patent Medicines." They were originally printed in the *Lancet* and are well worth perusal in their present form. We think Dr. HUTCHISON has done good service in exposing some of the misconceptions which prevail on the subject of so-called "patent foods." He shows very clearly that in a number of these preparations the actual amount of nutritive material is infinitely less, and a great deal more expensive, than can be obtained from ordinary foods; for example, he shows that honey contains wholly-digested sugar, ready to be absorbed directly into the blood, and consequently of much more nutritive value than malt extracts, which costs three or four times as much. Then, again, with regard to beef juices and extracts: these contain relatively so little proteid and so much extractive and mineral matter, that they are practically not foods at all. He shows that the various forms of oil-emulsions are not a bit more valuable as sources of fat than ordinary cream or butter fat, which are as easily digested and absorbed, and are also much more palatable and considerably cheaper. He further considers that the necessity for the use of peptonised foods is greatly exaggerated, and maintains that there are very few conditions of the stomach and intestines in which the digestion of the food constituents is not carried on quite well. Among the most useful of these patent foods appears to be the preparations of casein, such as nutrose, eucasin, plasmon, etc. These preparations contain from 80 to 90 per cent. of pure proteid, and hence a large amount of nutritive material can be supplied in certain conditions of disease where one wishes to enrich a fluid diet. From his remarks one would conclude that patent foods are luxuries rather than necessities.

Turning to the question of patent medicines, Dr. HUTCHISON speaks with no uncertain sound, although we hardly share with him in his somewhat optimistic remarks as to the possibility of patients ceasing to treat themselves with all sorts of patent mixtures. Such a practice will, in our opinion, continue to the end.

One of the most serious aspects, however, of this question is the deliberate fraud which is perpetrated by the purveyors of some of the so-called "drink cures." We admit that certain patent medicines, for example, the aperient pills, which contain well-known and commonly-used drugs, can be used with benefit; but when we learn that one so-called "drink cure" consists of 98 per cent. of sugar and 2 per cent. of salt, and another one consists of chlorate of potash and sugar, we can only regard such preparations as deliberately fraudulent, and only calculated to add to the grief and distress of the friends of the dipsomaniac whose hopes have been raised by the vaunted efficacy of such cures.

As a means of fighting this sort of quackery Dr. HUTCHISON thinks that two things can be done. First of all we must educate the public by teaching them the elements of physiology, so that they will be able to realise that the same set of symptoms may be produced by totally different diseases, and so they will come to distrust the value of a patent medicine, which is supposed to cure symptoms without reference to their cause. The other weapon for fighting this evil is an important one. In view of the oft-repeated statements that patent medicines have succeeded in curing patients who have failed to obtain relief at the hands of medical men, he considers that this would not be possible if medical men themselves paid more attention to the treatment of disease, especially the treatment of minor ailments. Symptoms which may appear to the medical man to be trifling and not significant of any serious disease may nevertheless be very real and a source of great suffering to the patients themselves. There is no doubt that a want of proper appreciation of this fact, and a failure to carefully investigate the causation of these symptoms and to apply appropriate treatment, often drives persons to the use of patent medicines; and the latter, succeeding in their object, are credited, and perhaps rightly, with effecting the cure.

THE CRUSADE AGAINST TUBERCULOSIS.

WITHIN the last few weeks some definite forward steps have been taken in Sydney in the crusade against tuberculosis. The new by-laws proposed by the Health Committee of the Municipal Council, to which we referred in our last issue, were approved by the Municipal Council at its meeting on October 19th, and have now the force of law. Under these, pulmonary consumption is a compulsory notifiable disease within the city boundary. Failure to notify a case renders the medical practitioner or householder liable to a fine of £10. One argument adduced against these new regulations was that as the by-laws were to be enforced in the city only, it was unfair to make pulmonary consumption a compulsory notifiable disease until the Board of Health could enforce a uniform practice in all the metropolitan area. At the special meeting of the New South Wales Branch of the British Medical Association, called to discuss the resolutions proposed by Dr. SINCLAIR GILLIES, the principle of compulsory notification of pulmonary tuberculosis was unanimously approved, and the Board of Health have been requested to take the necessary steps to include pulmonary tuberculosis in the list of notifiable infectious diseases under the Public Health Act. There seems little doubt, therefore, that before long compulsory notification, which is now enforced in the city by the city by-laws, will be extended to the whole of the metropolitan area, and, perhaps, even to a still wider extent throughout the State.

Another important movement which has taken place has been the organisation of the New South Wales Branch of the National Association for the Prevention of Consumption and other Tubercular Diseases. This has now been officially recognised by and affiliated with the Home Association. Members are now being enrolled, and the Association has entered upon active work. This organisation cannot fail to exert a powerful influence for good in the community in the way of disseminating information about the disease, and the various methods to be adopted to prevent its spread.

At another meeting in the city, held recently, it was decided to establish a City Dispensary for the treatment of pulmonary tuberculosis. This is not in connection with the City Municipal Council, but is a new charity, to be controlled by a committee of medical men and laymen. The objects of this dispensary are stated to be the scientific diagnosis of cases of the disease, the providing of food and medicine, the supply of nurses, etc. We can only reiterate what we expressed last month on this matter, and regret that a new charity is to be started only to cover ground which is already supplied by other charitable institutions. The general hospitals, both in their indoor and outdoor departments, provide all that is necessary for the scientific diagnosis and treatment of this disease so far as that can be carried out in the metropolis; the Benevolent Societies and the District Nursing Association provide food for the needy and nurses for the sick in their own homes. The hospitals and charities generally are sadly in want of funds to enable them to carry on their work, and we think that the establishment of a new charity of this nature is an unnecessary additional burden on the charitable public.

What *is* needed, however, most urgently is suitable provision for advanced and chronic cases of this disease, which are constantly coming under the observation of every medical practitioner, and for whom nothing special is being done. We believe that some proposal to utilise the Coast Hospital for advanced cases is now under consideration, and we think that no effort should be spared by the profession to impress upon the Government the importance of dealing with this question without further delay.

THE MONTH.

The Royal Alexandra Hospital for Children and its Medical Staff.

According to a report in the *Sydney Morning Herald*, the committee of the Royal Alexandra Hospital for Children in Sydney, at its meeting last month, on appointing Dr. Macdonald Gill to the position of full physician to the hospital in succession to the late Dr. Angel Money, expressed the opinion that, "although in this instance they had appointed a gentleman already holding a position on the hospital staff, it should be understood that, on vacancies occurring on the staff, doctors already connected with the institution would not necessarily be preferred to other members of the profession, as they considered it their duty to appoint the applicants with the highest qualifications for the position." We hope that the committee of this hospital will seriously consider that they have to reckon with members of the profession outside their staff as well as with those already on the staff. It is generally considered that junior members of a hospital staff, who have for years worked in the out-patient departments, with occasional charge of the wards, are those most competent to fill the positions on the full staff; and it is a generally recognised rule that promotion to the full staff is the legitimate reward to be offered to the members of the junior staff for their years of service. If the Board have appointed gentlemen to the junior staff on the principle of selecting the best from amongst the applicants for these posts, then, surely these gentlemen, after years of diligent work in the hospital, should be the best for the senior appointments. If, however, the Board deviate from this principle and decide to appoint those outside the hospital staff to fill the senior appointments, we are afraid that they will have some difficulty in securing applicants for either their senior or junior posts, and such action will tend to bring about a serious position of affairs in connection with their hospital.

The Proposed Hospital for Chronic Consumptives at Royal Park, Melbourne.

The same difficulties which stand in the way of obtaining a site for a hospital for chronic consumptives in Sydney appear to lie in the path of the authorities in the neighbouring capital of Victoria. It was recently proposed to utilise a site at Royal Park for an institution for chronic and advanced cases of this disease. Recently a deputation representing the Melbourne City Council and all the northern metropolitan municipalities waited upon the Premier to object to this proposal, the objection being that the Park was a popular resort, and the existence of a consumptive hospital there would be a source of grave public danger. Dr. Greswell, President of the Board of Health, pointed out the necessity there was for an institution of this nature in the heart of the city. It would be of immense value to every one of the councils represented on the deputation if such an institution were provided, the site proposed being thoroughly suitable, and the expense of management would not be very great. We are glad to note that the Premier did not appear to share the views of the deputation, and expressed his determination to do something to provide accommodation for these unfortunate patients.

Pulmonary Tuberculosis in the Sydney Government Printing Office.

A board, consisting of Dr. Ashburton Thompson, Dr. P. Sydney Jones, and Dr. R. J. Millard, were appointed to hold an inquiry into the alleged excessive incidence of consumptive disease among employees af the Government Printing Office, Sydney. These gentlemen have now furnished their report, in which they state that from 1894 to 1903 there were 45 deaths from all causes among the 680 members of the permanent and temporary staffs. The deaths due to consumption were 21, of which 11 occurred among the compositors, who on the average numbered 240. The incidence of the disease on the composing staff was more than twice as heavy as it had been on the male general population of the metropolis in 1901. A similar excessive incidence of consumption among compositors was usually observed in other countries. The board was of opinion that the cause was not inherent in the trade processes; that it was, strictly speaking, incidental to the extrinsic conditions of work, and it was largely remediable, and have made recommendations with a view to reducing the incidence of consumption in the Government Printing Office. Spitting on floors and into pocket-handkerchiefs, or anywhere except into a pocket spittoon, should be prohibited, on pain of dismissal. The permanent and temporary employees on the composing staff should be medically examined half-yearly, at least as regards those who had taken sick leave or to whom attention may have been directed by the overseer. The most important matter was to secure very free ventilation without draught. Scrupulous cleanliness should be aimed at. Dry sweeping, dusting, etc., should be given up. The dusting of type cases by the "blowing out" process should be given up.

Sydney Water Supply.

As we have noted previously, some considerable anxiety exists as to the sanitary condition of the catchment area for the Sydney water supply, and steps are now being taken to pass an Act which will give the Metropolitan Board of Water Supply more complete control of the catchment area than it has at present. Mr. T. W. Keele, the president of the board, in the course of a minute on this question, remarks that the situation is now more urgent than before it was determined, on the recommendation of the Royal Commission of 1902, that the fullest advantage should be taken of the facilities for storage of water on the present catchment area, by constructing a dam on the Cataract River; and as time goes on, and further storage is required, other dams will be constructed on the Cordeaux and Nepean Rivers. The necessity for the board to acquire full control of the surface of this area has been emphasised by a personal inspection of the reservoir recently constructed for the supply of Wollongong, where there are farms, dwelling-houses, cowyards, piggeries, etc., which are situated so close to the impounded water that the whole of the drainage therefrom must be swept in during rainstorms. The case of Wollongong has been specially mentioned to show the dangers which are attendant upon the storage of water on the catchment area, unless that area is either owned by or exclusively controlled in the interests of the water consumers. It appears that the whole of the area at the head of the southern branch of the Cataract River down to the extreme limit of the water to be impounded in the new Cataract Reservoir has been either purchased or held on lease by the colliery proprietors, and it is obvious that unless the Metropolitan Board obtain the sanitary control of the surface over which water is collected, there is a great danger of the pollution of the metropolitan water supply. We hope that Parliament will see the importance of passing this measure at an early date.

Proposed New Poisons Act.

The Pharmacy Board of New South Wales have asked Government to bring in a new Poisons Act, of which they have submitted a draft. Having read this draft we wish to express the hope that Parliament will see their way to pass such a measure as soon as possible. The old Poisons Act is now about 30 years old, and is utterly inadequate for the requirements of this community. To give the salient points where the old Act is deficient, we merely wish to say that the Act does not prevent any person to give poisons away; this simply means that anyone may legally hand out strychnine free of charge to every person in the streets. Poison for the purpose of bringing about abortion may be given free of charge, and the law is not able to prevent it. Any person can to-day legally sell poison for photographic purposes, *f.i.*, cyanide of potassium. All this can be done to-day without restriction, without license, without record, and even without marking the package or bottle that it contains poison. Any person may sell any poison he likes, stating that he deals wholesale, and the law may not interfere, because the old Act exempts wholesale dealing without stating what that shall mean.

The proposed new Act is based on the principle that no person shall be allowed to sell or give or supply poison of any kind unless he is licensed to do so, and this is as it should be. Provisions are made that beer bottles, etc., shall not be used for carbolic acid, etc., etc. Poison which can be used to bring about abortion must not be sold unless by doctors' orders, and no repeat shall be allowed except by doctors' special order. Ample provision has been made to issue licenses to dealers in poisons necessary for pastoral, agricultural and industrial purposes. A small fee has been provided to enable the board to carry out the provisions of the Act. All licenses are to be made annual ones only, and must be annually renewed. We notice a good clause in the proposed Act, namely, that in cases of emergency, such as epidemics, the board shall issue special licenses to duly appointed distributors of poisons for the purpose of supplying necessary poisons free of charge. The Act has been drafted on sound principles, and appears to be a workable Act in the interest of the public health, and we trust that it will receive prompt attention from the authorities and from Parliament.

Proprietary Medicines.

At the recent meetings of the Chambers of Manufactures in Brisbane last August the question of the sale of proprietary medicines containing poisonous ingredients, such as morphia or opium, was under consideration. Last month a deputation from the Chambers of Manufactures waited upon the Federal Minister for Customs to draw his attention to the resolution commending this matter to the several Governments of the States. The deputation drew the attention of Mr. McLean to portions of the evidence given before the New South Wales Commission on the birth-rate, wherein it was stated that large quantities of proprietary medicines containing poisons were extensively sold; that many of the medicines were dangerous on account of morphia or opium in their composition; and that they were often innocently administered by mothers to their children. The deputation asked the Minister to use his powers as far as the law would allow to stop the traffic, and if necessary to seek to obtain from Parliament full powers to deal with this evil. Mr. McLean, while in sympathy with the deputation, pointed out that there were some difficulties in the way of effectively carrying them out. He stated that in the the Trades Marks Bill now before the Federal Parliament there was a provision to compel persons to properly label imported medicines. This, however, did not prevent persons who were so disposed from removing these labels and altering them so as to deceive the public. After the goods had passed through the Customs they had passed out of the purview of the Federal into the domain of the State authorities. Mr. McLean promised, however, to give the matter further consideration.

The New South Wales Institution for the Deaf, Dumb and Blind.

The annual report of this institution shows that on September 30th, 1903, there were on the rolls 78 deaf and dumb pupils and 17 blind pupils, making a total of 95. During the year 16 had been admitted and 23 discharged or removed, leaving the number of pupils now on the rolls 88—16 blind and 72 deaf and dumb. Reference was made to the carelessness and indifference of some parents who kept their afflicted children at home and did not seem to realise that, in depriving them of the education and training afforded by such an institution as that, they were doing them a great injustice, and seriously handicapping their future prospects. As the directors had pointed out on many previous occasions, there was no remedy for this state of affairs in regard to deaf and dumb and blind children other than a compulsory Education Act, under which parents should be obliged to have their afflicted children educated at the proper age. Early in the year a bill for that purpose was prepared under the direction of the board, and copies were forwarded to the Minister for Public Instruction in the hope that this or some similar measure would be submitted to Parliament and passed into law. But, unfortunately, Parliament had been in recess almost ever since, so that up to the present time nothing further had been done in the matter. The year commenced with an overdraft on the general account of £192 16s 2d. The income for the year was £4903 8s 11d, and the expenditure, including the above overdraft, was £5105 3s 4d, leaving a debit balance of £201 14s 5d. The income for the year exceeded that of the previous year by £244 4s 2d; subscriptions and donations showed an increase of £82 7s 11d; school fees of £89 19s 5d; interest, £50; and other receipts, £21 16s 10d. On the other hand, the expenditure exceeded that of the previous year by £60 6s 3d, caused entirely by the outlay for necessary painting and repairs. The report contained a graceful recognition of the long and valuable services of Mr. Ellis Robinson, who had been obliged to resign the honorary secretaryship on account of illness. The institute for the adult deaf, which had been erected on an adjoining site and had been transferred by Act of Parliament from the Board of Water Supply to the trustees of the institution, was doing a most useful and beneficent work amongst the deaf of the city and suburbs.

Royal Naval Sick Berth Reserve.

We have received from Dr. G. Lane Mullins, the Commissioner of the St. John Ambulance Brigade in the Commonwealth, a copy of the circular he has issued calling for volunteers for service in the Auxiliary Royal Naval Sick Berth Reserve.

The Admiralty have decided to establish in Australia a branch of this force, which was formed in England last year for service afloat and on shore in time of war or emergency. The reserve is formed for the purpose of supplementing the permanent sick berth staff of the Royal Navy in time of national emergency and maritime war only, and cannot be called out for service at any other time. Enrolment in the reserve does not entail any extra drill or duty of any kind whatever in time of peace, beyond attendance at an annual inspection. Special free courses of instruction will be provided for enrolled men who are in possession of the ordinary nursing certificate of the St. John Ambulance Association, but only those who wish to be rated as senior attendants need necessarily attend those courses. On volunteering, the candidate will be medically examined to see that he is physically fit, in accordance with the regulations in force for the Royal Navy, but the tests applied will be less severe for home and foreign hospital service. He may use spectacles if, with them, he can read ordinary print, and thoroughly supervise a ward. So long as they cause neither pain nor inconvenience, varicocele and varicose veins may be present if not too marked; and the regulations with regard to teeth may be relaxed if health is clearly not interfered with. For the service afloat he must, however, be able to read and supervise without glasses, and his teeth must be in accordance with Admiralty standard. This examination may be made by any naval medical officer approved by the Admiralty, or by the brigade or corps medical officers, and is to be repeated every three years, and on being called up for service. If he has been previously medically rejected he is to declare the cause. He must declare that he has never been subject to fits, or been ruptured, and that he knows of no physical defect that will prevent his doing duty in time of war. The volunteer must have been vaccinated and be prepared to be re-vaccinated if it be considered necessary.

The State Children's Relief Board.

The report of the New South Wales State Children's Relief Board for the year ended April last, just presented to Parliament, states that the total number of children under supervision was 7204, or 23 more than at the close of last year. Of these, 3779 are boarded out, apprenticed, or adopted apart from their parents, and 3435 were with their own mothers, who receive monetary allowances towards their support. In the former division there have been a falling off of 26, but in the latter an increase of 49 was noted. The boarding-out system was established under the State Children Relief Act of 1881, and since then 12,640 children had been provided for, apart from their parents, while allowances had been made towards the support of 11,743 children with their own mothers under the amended legislation of 1896. A total of 24,383 children had thus passed under the board's care in 23 years. The total expenditure for the year amounted to £70,924 10s 9d, or £2115 17s 11d in excess of the expenditure for 1903. The actual cost to the State of each child boarded out during the year was £15 11s 11d, the daily average being 2169. In boarding out children the aim of the board is to secure as far as possible individual care and affection for the children. Only those homes are selected where the number of the proposed guardian's own children is small, and not more than three State children as a rule are placed in one home except in the case of families. Under this system, 521 families of children had been kept united. The number of apprenticed children on April 5th last was 732 boys and 462 girls.

BRITISH MEDICAL ASSOCIATION NEWS.

PROCEEDINGS OF AUSTRALASIAN BRANCHES.

New South Wales.

A SPECIAL general meeting of the Branch was held at the Association Rooms on Friday, October 14th, 1904.

In the absence of the president and vice-president, Dr. W. H. Crago was voted to the chair. There were 32 members present.

The CHAIRMAN stated the business for which the meeting was convened, and called upon Dr. Sinclair Gillies to move the following resolutions:—1. "That until such time as the Board of Health declares pulmonary tuberculosis to be a notifiable disease, the honorary medical officers of the metropolitan hospitals be requested to voluntarily notify to the Board of Health all cases of pulmonary tuberculosis occurring in their hospital practice." 2. "That a copy of this resolution be sent to the President of the Board of Health with a request to co-operate in the prevention of the disease, the detection of early, and the housing of advanced cases."

Dr. SINCLAIR GILLIES said: When I tabled the motions which I bring forward to-night, I hoped that they would have met with the approval of the majority, and that discussion would have been brief. From what criticism I have received before the meeting I find I shall be compelled to defend my position, and so have to occupy more time than would otherwise have been necessary. I shall, however, be as brief as possible. All will, I think, agree to the following premises:—1. That pulmonary tuberculosis is to a great extent a preventable disease, and that being so it is our duty, as a profession, to do everything in our power to aid in its prevention. 2. The need for much more active steps than are at present being taken in combating the spread of the disease. 3. That the disease is conveyed mainly by dried expectoration. 4. That the poor are the chief centres of such method of dissemination. 5. That no adequate steps can be taken to stamp out the disease until such centres are discovered. 6. That no adequate provision exists at present for the care of advanced cases among the poor, who thus become a menace to the general health of the community and a slur upon our name for humanity. No case has a less chance of getting into a general hospital than one of tuberculosis, and yet we provide no accommodation elsewhere. That this state of affairs is allowed to exist is a disgrace to us as a profession, for it is to us the sufferer comes, and it is for us to convince the public of the need for providing homes for such cases, if only from the selfish standpoint of self-preservation. 7. That among the poor, cases of tuberculosis rarely seek medical aid until in a fairly advanced stage, after the most favourable time for treatment has passed. This statement is borne out by our experience in hospital practice and by the fact that among the large number of applicants for admission to the Queen Victoria Home for Consumptives very few are in an early stage. The remedy for this deplorable condition perhaps lies in compulsory notification of pulmonary tuberculosis and subsequent action by the health authority. If all cases of pulmonary tuberculosis were notified, the health authority could visit the patient, instruct him in the precautions necessary for the safety of others, and insist on their being carried out; could disinfect premises at present or lately occupied by consumptives; could prevent the re-letting of premises lately inhabited by consumptives without adequate disinfection; and could detect foci of infection in the home or workshop; could detect possible early cases and urge them to seek medical examination. These things the health authority could and, I feel sure, would do. Unfortunately the question of compulsory notification is not as simple as it is in the case of acute infectious diseases, and many objections have been raised against it—some, doubtless, imaginary, but some very real; and I fear it will be some time yet before the public can be convinced of the advisability of such a measure. Several to whom I have spoken have said we *must* have compulsory notification. Let us have it by all means, but don't let us think we are going to get it all at once. If we get it through the Board of Health, a special Act will be required; if through the municipal councils, months or even years will elapse while one municipality watches how notification answers in the neighbouring municipality before committing itself. In the meantime, while the politician or local councillor is undergoing conversion, are we going to sit still, or are there any steps that we can take to help stem the tide of this fell disease? Voluntary notification in the case of hospital patients is, I think, a step of some practical value in that direction. Understand, I do not put this scheme forward as in any way an alternative to compulsory notification, but simply as a plan by which we can in the meantime do a considerable amount towards checking the spread of this disease, and can at the same time pave the way for compulsory notification. The scheme is briefly this:—That honorary medical officers of the metropolitan hospitals agree to voluntarily notify to the Board of Health all cases of pulmonary tuberculosis occurring in their hospital practice. Such notification is confidential, and can, if it be thought advisable, be dependent on the consent of the patient. Forms for notification could be supplied by the Board of Health, and could be returned once a week either by the honoraries or by the medical superintendent. At the same time the honoraries agree to instruct the patient in the best means to prevent infection, and to present him with a printed form of instructions such as has been in use at Royal Prince Alfred Hospital for a year or more. This form could be supplied by the Board of Health. They also agree to send early cases on to the secretary of the Queen Victoria Homes for Consumptives. There the duties of the honorary end. The Board of Health on receipt of notification sends a medical officer to inspect the home, to instruct the patient, to disinfect when and where necessary, to inquire for possible early cases and urge them to go to hospital or to a doctor for examination, to urge advanced cases where proper precautions cannot be taken to go into wards for such cases to be provided by the Board of Health. He also visits from time to time those cases remaining in their homes to see that adequate precautions are being taken. Where the patient must for any reason remain at home, the help of the District Nursing Association could be invoked, whose nurses could, in addition to caring for the patient, aid in teaching the necessary precautions in respect to sputum, etc. In cases of extreme poverty, the officer of the Board of Health could give an order for food to be obtained from the Charities Organisation Board, and could provide the necessary spitting flasks, etc. Where facilities for examining sputum for tubercle bacilli do not exist at the hospital, the Board of Health could undertake the work, as, in fact, it does now. Such being the scheme, what do we gain if it can be carried out? At a low estimate the metropolitan and suburban hospitals deal with 600 cases of pulmonary tuberculosis per annum. It means, then, that 600 centres of infection are investigated and rendered less liable to spread infection. It means the probable detection of many early cases arising from these centres, and so the opportunity of treating such cases in the early stage with considerable hope of arrest or cure. It means the provision of accommodation for advanced cases, and so the removal of centres of infection, and to the poor patients it means comfort and care in their latter days. Such accommodation could be provided at a relatively small cost at the Coast Hospital. An unsuitable place, you will say. Well, the unsuitability of the coast in such cases has yet to be proved. We are accustomed to deprecate treatment near the coast, yet in hospital practice we find that marked improvement generally takes place where the patient is put to bed in the open air on the verandahs of the large hospitals. In any case there could be no objection on the part of the public to such a course, an objection that has so far prevented the erection of a home for advanced cases elsewhere. As public opinion became educated, we could move them elsewhere, but in the meantime we would give them a home, and would diminish the centres of infection in our midst. Lastly, we should do much in educating the public and the patient—a most important point. At present we have on the one hand gross carelessness, and on the other unreasoning fear. When the public fully understand the nature of the disease and its means of spread, then compulsory notification will become possible without inflicting hardship on the individual. Now for the objections that may be raised to the scheme:—1. Its incompleteness. It makes no claim to being a complete solution of the problem, but only a considerable step in the right direction. 2. The voluntary nature of the notification. It is said that we shall lay ourselves open to actions for slander, breach of professional secrecy, and what not, and that patients will shun the hospitals and the doctors who notify. This, I feel sure, is a bogey of a harmless nature. The notification is *confidential* to the president of the Board of Health, and can, if necessary, be conditional on the consent of the patient. Into whether it is or is not technically a breach of confidence I need not enter. Technically it is a breach of confidence to demonstrate a case of heart disease to a class of students or to tell a man his wife has pneumonia without her express consent. Practically, I feel sure, no trouble will arise on this score. As to patients shunning the hospital, that, too, is a needless fear. When the public learn that their hope of cure lies in the early detection and treatment of the disease, we shall have no trouble on that score. As to the possibility of doing something by voluntary notification, it may interest you to know that in Manchester, with a population of 544,000, there are an average of about 1400 cases voluntarily notified every year. 3. The difficulty in carrying out the scheme. Our part is simple enough, and can only fail from personal carelessness. As regards the Board of Health, I feel sure that if we as a profession go to them and say we are prepared to do what we can, will you help along the lines indicated above, the Board will be ready to do all we want. If we succeed only so far as to obtain accommodation for chronic cases at Little Bay, we shall have at least done something practical. I beg, therefore, to propose: (1) "That until such time as the Board of Health declares pulmonary tuberculosis to be a notifiable disease, the honorary medical officers of the metropolitan hospitals be requested to voluntarily notify to the Board of Health all cases of pulmonary tuberculosis occurring in their hospital practice." By metropolitan is meant city and suburban. I beg also to move: (2) "That a copy of this resolution be sent to the President of the Board of Health with a request to co-operate in the prevention of the disease, the detection of early, and the housing of advanced cases." In the event of these resolutions being carried, I would suggest that the secretary of the Association communicate first with the honorary medical officers of the metropolitan hospitals, asking whether they are willing to fall in with the wishes of the Association in the matter. That on receipt of their replies be write to the Board of Health, pointing out that we are prepared to do our share, and asking the Board, in the name of the whole profession, to assist us along the lines outlined above. Such a request, not from individuals but from the profession as a whole, would, I feel sure, have great weight with the Board, and would probably ensure success. Some of our members, I believe, want more comprehensive measures, and will move amendments to that effect. I would ask them to remember that more drastic measures will require longer time before they can be enforced, and would suggest that if they see any merits in this scheme as a temporary expedient and way of gaining partial success that they so word their amendments as not to prevent us grasping the difficulty practically, if partially, in the meantime. Thanks to the energy of Dr. Armstrong, it seems probable that the City Council will shortly make notification compulsory in the city. Still the by-laws have yet to be passed, and when passed refer to the city only. How long will elapse before the suburban councils follow suit is a very doubtful question.

Dr. SYDNEY JONES, sen., said: In the crusade against tuberculosis we need to employ every possible legitimate weapon. We need to educate public opinion by the dissemination of literature and by public lectures, setting forth the manner of infection and spread of the disease, and the measures which can be adopted for its prevention. We need sanatoria for the treatment of the early cases. We need special hospitals for the reception of the advanced cases. We need hospices for the reception of the dying. We need tuberculous colonies where those discharged from the sanatoria with the disease arrested may follow light outdoor occupations, and be saved from the relapses which so often occur owing to their return to the unhealthy conditions of life in which they contracted the disease. We need the establishment of a fund for the sustenance and support of the families of the patients during their absence at the sanatorium or hospital. And, finally, we need notification either voluntary or compulsory. Voluntary notification can effect a great deal. It enables us to ascertain approximately the number of cases at large and their distribution, the source of infection, and the occupations of the sufferers. Of course compulsory notification can secure these ends more efficiently, but there are objections to it. Thus it involves a breach of the ethical rule that we shall not reveal the diseases of our patients. It may deter patients from seeking advice in the early stages of the disease, in which it is most amenable to treatment. It subjects the patient to a system of surveillance which is very objectionable to some minds. Finally, all authorities in England agree that compulsory notification under the Infectious Diseases (Notification) Act of 1889 is at present impossible. Sheffield is the only town in which notification is compulsory, and the experiment is limited to a period of seven years. I confess that the hesitation to make tuberculosis compulsorily notifiable exhibited by the Local Government Board in England has great weight with me, and I am therefore disposed to urge that we should go slowly in this matter, adopt voluntary notification and see how it works. In course of time the community may be educated up to the point at which the advantages of compulsory notification will be recognised. With these remarks I beg to second the resolutions moved by Dr. Sinclair Gillies.

Dr. Rennie moved the following amendment:—1. "That in the opinion of this meeting compulsory notification of pulmonary tuberculosis is essential for the successful conduct of the fight against tuberculosis. That the New South Wales Branch of the British Medical Association hereby accords its hearty support to the new by-laws proposed by the health committee of the City Council." 2. "That the resolution be communicated to the Lord Mayor and the City Council." He said that there was no doubt that they were all agreed in their desire to check the progress of tubercular disease, and they only differed in the exact methods to be adopted. He was in entire sympathy with practically all that Dr. Gillies had said, but could not agree with him that voluntary notification was the best means to be adopted to effect their purpose. He considered voluntary notification to be impracticable for three reasons: (1) Voluntary notification undoubtedly involved a breach of professional secrecy, and would make a medical practitioner liable to action in a Court of law: (2) it would be ineffectual because only a relatively small number of cases would be notified, even supposing the principle were carried out; (3) judging from his experience as one of the medical referees to the Queen Victoria Homes for Consumptives, he was afraid that voluntary notification would not be carried out effectually by the honorary medical staff of the hospitals. He thought that they were all agreed that compulsory notification of pulmonary tuberculosis was the principle to be aimed at sooner or later. They were perhaps not all agreed that the time was yet ripe for its adoption. Dr. Gillies had very forcibly urged that while in the past there had been much talk there had not been much practically accomplished, and he strongly advocated that something should be done at once. Dr. Rennie argued that at that time they had an opportunity of securing something very practical in the way of securing compulsory notification at any rate so far as the city of Sydney was concerned. The proposed new by-laws dealing with this question would at once introduce the principle of compulsory notification, and he thought that for that reason they ought to accord their hearty support to them. If then these by-laws were found to work satisfactorily in the city, the Board of Health could be approached with the request that they should compel the suburban municipalities to adopt similar by-laws, and they would thus secure compulsory notification over the whole metropolitan area. He wished to emphasise the point that if notification of pulmonary tuberculosis was made compulsory no hardship would be inflicted upon these unfortunate patients, there would be no interference with the liberty of the subject, and all that would be done would be in the best interests of the patients and their friends.

Dr. G. L. O'Neill seconded the amendment.

Dr. Pockley did not think that medical men would be legally bound by a municipal by-law to notify cases. Were they urged to notify cases simply for the purpose of obtaining statistical returns? Notification for any other object would be useless unless some action followed the notification. If the Board of Health were notified by the profession of cases of tuberculosis, and the officers of the Board visited the localities indicated and commenced the disinfection of houses, how could such a proceeding be considered as treating the medical men confidentially? The very fact of this disinfection being carried on would cause publicity. Granting that it was difficult to diagnose the disease in its early stage, would it not be likely that medical men would hesitate to notify cases, lest an action for damages should be brought against them? Moreover, if notification were not compulsory, medical men would be guilty of breach of confidence in reporting cases, even when proved to be tubercular. With regard to private practice, would a practitioner like to have a Government medical officer visiting his patient and probably recommending proceedings as to disinfection different from those urged by his medical adviser? The patient would probably conclude that the Government officer was correct, and hence the practitioner would be at a disadvantage. One of the chief drawbacks to this country was the Government interference in everything. Was it advisable for medical men to invite official interference with their private cases?

Dr. Camac Wilkinson said: It is many years since I first urged upon the medical profession the importance of measures for the prevention of consumption. Even more than seven years ago I advocated the compulsory notification of consumption when the conditions were such as to render the risk of infection obvious and serious. The danger varies with the stage of the disease, the surroundings of the sufferer, and the nature of his occupation. If the sufferer expels infectious material in large quantities from his lungs; if he cannot afford to pay for a doctor or nurse; if he spends his time in close association with his family or his companions at work; if he is a teacher, or a purveyor of food, such as bread or milk, which is consumed in the fresh state, there is an obvious risk of infection, and measures should be introduced by the State to deal with the disease as it occurs under these conditions that intensify the danger. Thus I approve entirely of compulsory notification under these restrictions—a system that has worked satisfactorily in America, Italy and Norway. But the proper authority to introduce this restricted notification is not the City Council by means of special by-laws under a strained interpretation of the Public Health Act, but the Board of Health. In the City Council I raised the question of the validity of these by-laws. That matter must be settled by the Attorney-General. The City Council has power to pass by-laws for the promotion of public health. It appears to me that a by-law which, under a penalty, compels a small section of a class (the medical profession) to notify cases of consumption is *ultra vires*. If the City Council has the power to do this in the case of consumption, it has also the power to compel the notification of syphilis and gonorrhœa. It is quite certain that when the Act was passed, the compulsory notification of consumption, of syphilis, or gonorrhœa was not contemplated. If the Board of Health has not advised general compulsory notification, it is surely not wise for the City Council to introduce a by-law that compels medical men practicing within the restricted municipal area to notify all cases of consumption, while doctors in Paddington, North Sydney, Redfern, the Glebe, do not notify even if their patients live within the municipal area. The unequal incidence of such a by-law is manifest. If general compulsory notification is to be the law of the country, let it be introduced by the front door (Board of Health) and not sneaked in by the back door. The question of compulsory notification in cases of consumption is a very difficult one; and we must recognise that in the most enlightened countries general compulsory notification does not exist. Compulsory notification should only be introduced if and when other methods have failed, and even then only if such notification leads to certain definite practical results. Compulsory notification *per se* has no virtue of its own; in smallpox and plague compulsory notification is but a means to an end. In these diseases compulsory notification is justified because it leads to isolation of the infected and infecting person, segregation of the contacts, and subsequent disinfection of the infected places and materials. In these epidemic diseases, then, notification is an indispensable step towards the prevention of further infection. But pulmonary consumption cannot be classed with such epidemic diseases as smallpox, plague, etc. In these epidemic diseases, such as smallpox, plague, scarlet fever, and the like, the disease is acute, soon develops symptoms by which it can be definitely recognised, cures itself in a short space of time—in the course of a few weeks—and once the disease has run its course the patient soon ceases to be a source of danger through infection. *The infection rapidly dies out.* Accordingly by means of early diagnosis, followed by isolation of the patient, in some cases segregation of contacts and systematic disinfection, further infection is prevented, at any rate to a very large extent. In such cases—even though the sanctity of the family and the liberty of the subject may be attacked—the end justifies the means, because the community is thus protected against infection. But consumption is essentially a chronic disease, is by no means always easy to recognise in the early stages; instead of occurring in epidemics is a very common disease amongst us at all times; does not work out its own cure in a short space of time, but rather continues as a source of infection, not for weeks or months but for years, so that the prophylactic machinery involving diagnosis, isolation and disinfection inevitably breaks down through its own weight. I think I am right in saying that these are the very reasons why it is recognised in enlightened countries that the prevention of consumption requires different methods to those adopted for the prevention of the acute specific diseases. Epidemic diseases, if they were as widespread as consumption, and lasted years instead of weeks, could not be dealt with by any system of compulsory notification. Epidemics of influenza and pneumonia, even though they last but a short time, could not be dealt with by compulsory notification, for the simple reason that the State could not undertake the charge of such a herculean task as that involved in the practical carrying out of scientific diagnosis, isolation and disinfection in all cases of influenza and pneumonia. Last year there were more deaths from pneumonia than from consumption. Accordingly we must adapt our measures of prophylaxis* to the special conditions that belong to consumption. 1. The diagnosis of consumption is not always easy. Before the City Council attempts compulsory notification it should have the means of making a scientific diagnosis. I have urged the establishment of a city dispensary for this very purpose, and I know of no better, simpler, or more economical way of compassing this desirable object. In such an institution we should be able to discriminate the different stages of the disease, and we should automatically discover the foci of infection. 2. Isolation of consumptives is a practical impossibility; so that the chief object of notification in cases of limited epidemics of smallpox and plague fails to follow compulsory notification in the case of consumption. Compulsory notification is robbed of its special virtue and value unless isolation and disinfection can be systematically carried into effect. To my mind disinfection without any provision for isolation cannot have any great prophylactic virtue. At the present time there is no provision at all for isolation. Indeed the refusal of hospital and sanatoria to admit advanced cases of consumption—a policy which I have actively urged on several occasions—a policy, too, which has been endorsed by the medical profession—actually intensifies the trouble, because no doubt the risks of infection in a hospital can be reduced to a minimum by certain precautions, and are probably far less than the risks in the home of the poor consumptives who seek to enter the hospitals. Accordingly, in my judgment, before we seek to enforce notification we should see that some means of relative isolation are provided. For many years I have been preaching that it is the first duty of the State to provide hospitals for advanced cases of consumption, so that if we discover cases of advanced consumption that are an obvious source of danger, especially in the homes of the poor, who cannot afford to pay a doctor or a nurse, these cases should at once be removed and taken care of at the public expense. Once these asylums for the poor consumptive are established, we may then have a practical object in enforcing notification. Till then our efforts in the direction of prevention are not likely to effect any great result. Till then we may educate the masses in various ways, and we can certainly practise disinfection. 3. Disinfection by itself, *i.e.*, without any isolation, has a limited value; but in my opinion disinfection can be practised to a very large extent *without general compulsory notification*, such as these by-laws suggest. Instead of requiring every doctor to notify every case of pulmonary tuberculosis, I should advise that compulsory notification in the first instance should be restricted to those cases which are an obvious source of danger to the healthy. Let us begin by confining our measures to conditions that render the danger of infection more or less intense. 4. Let it be enacted that *all medical men* and, if you wish, *all undertakers shall at once notify to our Medical Officer of Health all deaths from consumption and other forms of tuberculosis* (*pleurisy, etc.*). Thereupon the house can be disinfected, and the members of the family, if necessary, inspected and instructed. If the dispensary system were established this would lead to early cases being discovered. By this simple enactment 120 to 140 houses would be disinfected every year in the restricted municipal area of Sydney alone. Here is a large field of work, and, with other duties, our staff might be thus taxed to its utmost capacity. Next, this field can be simply widened by compelling the secretary of the Victoria Homes for Consumptives, the superintendents, matrons and medical officers of hospitals (public and private), the superintendents of asylums, the heads of boarding schools, convents, orphanages, and public institutions of various kinds, even the managers of factories, managers of hotels and boarding-houses to supply themselves, or through medical men attending such cases, the names and residence of all consumptives who enter or leave these institutions. This should be enforced by a penalty on failure. If this were done, the staff at the Town Hall would be taxed beyond its capacity. But if more can be done, I feel certain that the doctors of Sydney, without compulsion, would gladly notify cases of consumption, especially among their poorer patients, who would then benefit greatly by learning how to avoid infection and by having their homes inspected and, if necessary, disinfected. Still, we must recognise that the chief source of infection is the consumptive who lives under conditions favouring infection, and during his life is a constant danger to his family and neighbours. Disinfection cannot do much in these cases unless the constant source of danger is removed, and our first duty is to urge upon the Government, through the Board of Health, the pressing necessity of making some provision for removing these constant sources of infection to suitable places where they can be treated, properly fed, and nursed at the public expense. Lastly, it is desirable that legislation should be introduced to prevent consumptives from being purveyors of food, especially milk, bread, and fruit, and from following the occupation of nurse, children's maid, or even public school teacher.

Dr. **Mills** said it appeared from what had transpired at the meeting that all present desired the principle of notification. He regarded the scheme as advocated by Dr. Gillies as a rather emasculate one, but the object was, perhaps, to bring in the thin edge of the wedge. He did not think they should be guided by the action of the Local Government Board of England; a certain allowance should be made for the conservatism of that country. He sympathised with the amendment moved by Dr. Rennie. But Dr. Pockley had drawn attention to a vital point, that with respect to the legality of the proposed by-laws of the City Council; if these were illegal, then it would be useless for the meeting to recommend them.

Dr. W. G. **Armstrong** thought that the legality of the by-laws proposed by the Health Committee of the City Council was sufficiently guaranteed by the fact that before adoption they had been submitted to the Council's legal adviser and approved by him. The by-laws proposed would not inflict any disability on patients suffering from phthisis, nor would they impose any duty beyond that of notification upon the medical man, while on the householder they would impose the duty of notifying changes of address. The objects sought were the acquisition by the local authority of knowledge of the whereabouts of consumptive persons and of changes in their domicile, in order that educative influences might be brought to bear on consumptives and their households, and that all dwellings vacated by consumptives might be disinfected. In all cases of notification by a medical attendant, the notification would be treated as confidential, and no action would be taken by the local authority without the consent of the medical practitioner attending the case. At this stage he hardly thought any vindication of the principles involved in notification of phthisis was necessary. The only point at issue was whether compulsory notification was expedient at the present time. He thought the time was now ripe for the steps proposed by the City Council. It was true that the English Local Government Board had hesitated to recommend the compulsory notification of phthisis, but, on the other hand, it had not opposed it; and the British Congress on Tuberculosis in 1901 unanimously passed a resolution in its favour. The opinion of Professor Koch, expressed at that congress, was to the effect that compulsory notification of phthisis was urgently needed for the effectual prosecution of the fight against tuberculosis. It was an advantage that such new, and, as regards its administrative machinery, experimental legislation should be by means of municipal by-laws instead of by Act of Parliament, as the former could always be easily amended or repealed at short notice if it were found necessary, and the amendment of an Act of Parliament was a slow and tedious process.

Dr. T. **Storie Dixson** said that in New York the municipal authorities willingly undertook the microscopic examination of specimens of sputum submitted to them by medical men as being from patients suspected of suffering from tuberculosis, and no charge was made. So anxious was the Health Department to aid in this direction that special facilities were provided for the supply of apparatus suitable for collecting the sputum and forwarding it to them; this apparatus was obtainable gratis at a large number of depots (such as druggists' shops) and disseminated throughout the city. In this crusade the Charity Organisation Society of New York gave invaluable aid, and where the patient was too poor to pay, medical advice, food, clothing, and nursing were afforded, the chief object being to retard the dissemination of the ailment by the sufferer. They were all agreed as to the extreme difficulty of diagnosing early cases, but surely if reasonable tact, such as he had always noticed given by the health authorities here, were exhibited in this direction, and the above aid given in the case of the poor, he did not see what they had to fear from compulsory notification being extended to the ailment in question.

Dr. **Tidswell** said the prevention of consumption was not a subject from which a hygienist could escape if he would. He had been obliged for one official reason or another to bestow considerable thought upon it during recent years. The abundant publications which had reached him, and the expressed opinions of authorities all over the world, although varying as to suggestions and shades of thought, appeared to uniformly contain the underlying feeling that something should be done towards restricting the spread of the disease. The progress of knowledge had now clearly displayed what ought to be done; but, unfortunately, the doing of it was dependent at the present time upon the efforts of the many patients, few of whom would put themselves to the necessary trouble. It was all very well for the medical attendant, when there was one, to tell the patient that he ought to conserve and destroy his sputum; that he ought to have a separate bed or separate room, and a separate table and other service; that he ought to cough into a cheap handkerchief and afterwards burn it; that he ought to live in the open air; that he ought to eat such and such food, and so on; but no one knew better than the medical attendant that patients did not carry out these instructions. Sometimes they did not appreciate them, sometimes they did not care about them; often, although they both appreciated and cared, yet they had not the means to put them into practice. This kind of default, for whatever reason, had been so commonly noticed in relation to infectious diseases, that it had become a sanitary maxim that preventive measures cannot safely be left to the efforts of individual members of the community. They must be made somebody's business, and the constitutional somebody was the Public Health authority in the case of tuberculosis, just as much as it was in the case of other diseases. But it is obviously impossible for the health authority to take action unless informed where action is necessary. General measures were futile; the disease must be directly combated at its source in the homes of the infected. To act effectively, the authority must be informed where these homes are to be found; and the only satisfactory way of securing this knowledge is by a system of notification. He did not attach much value to voluntary notification. It was very irregular, resulted in only partial measures, and introduced undesirable complications into professional business. But he sympathised with Dr. Sinclair Gillies' proposal in so far as it was a measure in the meantime, and might afford a stepping-stone to greater things. The form of compulsory notificaton covered by the proposed by-laws of the City Council was good as far as it went, and did away with the professional difficulties already referred to, so far as the city practitioners were concerned. It is true the by-laws are of only local application, but they set an example which other municipal bodies might imitate if they would. It had been argued in the course of the debate that there should be hesitation in subscribing to compulsory notification, because central or supreme health authorities in Europe, no less than here, had refrained from promulgating this measure. He did not think the authorities were adverse to it; on the other hand he had reason to believe they were in favour of it; but State machinery moves slowly, and there are very many considerations which prevent administrative bodies doing all they would like to do. He felt he might, without breach of official rules, defend his department from the charge of indifference in the matter. The subject had been considered and deliberately rejected when the original Public Health Act of this State was being drafted in 1895. It had been considered several times since with a view of adding it to the list of notifiable diseases; but the conditions attached to these diseases by the Act were felt to be unnecessary in the case of tuberculosis. It was perceived that special measures were necessary; measures more adapted to the magnitude and nature of the disease to be dealt with, and he might go so far as to say those measures had been determined upon, and the department was ready with a proposal should opportunity be afforded to submit it for legislative approval. It had also been stated in the course of the debate that notification *per se* was of little use; it was only a means to secure preventive measures. This was true; but the preventive measures did not necessarily mean, as had been suggested, isolation of the patient and of contacts, nor serious interference with business and domestic affairs. No thoughtful person nowadays would be so foolish as to contemplate such things with respect to tuberculosis. Harsh measures were not necessary; the essential thing, to his mind, was to train the patient, his relatives, and the public generally to a sound appreciation of the position. Steady persuasion, teaching of the patient, his family, and regular supervision of their efforts, disinfection by skilled persons, provision of spitpots, suitable food, and other necessaries where occasion required, should constitute the main outlines of the preventive measures. Undoubtedly by getting into such close touch with tainted families there would be detected many threatened and incipient cases; some would be preserved from infection, others brought under proper treatment whilst in the early stage which offers the best prospect of cure. Thus future sources of infection would be nipped in the bud. The knowledge acquired would serve to stimulate the philanthropic impulses of the well. The actual facts at our very doors could be placed before them in such a way as to make manifest the need for dispensaries, sanatoria, and special hospitals for the benefit of those who cannot otherwise provide for themselves. So far from being interfered with by notification, the establishment of the institutions we so much need would be helped forward by it. All these seemed to him to be pretty valuable results which could be expected to issue from compulsory notification, but which without it would be as far off as ever. It might easily be that so little progress had been made in the past for lack of compulsory notification. If it still be argued that compulsory notification would involve intrusion into the sacred precincts of the homes, then it must be replied that the results outlined above cannot be achieved without intrusion; that the interference necessary is of a kind which people, especially poor people, have been found to appreciate; and that, moreover, some interference is inevitable if the disease is to be checked. It must be remembered that after all the prevention of disease is not a private matter, but a public matter; private interests must give way to some extent when they clashed with the interests of the community at large. It did not appear to him that such work as needed to be done with respect to tuberculosis would impose hardships or involve anything the community would not come to accept. His contention was not that there were no objections to the compulsory notification of tuberculosis, but that such as existed were overwhelmingly counterbalanced by the benefits that might reasonably be expected to result from its application. He would submit that if we waited till there were no objectors we should go on doing nothing for evermore. As a final argument he would point out that the notification could be arranged for in such a way that it could be promptly abandoned by simple revocation of a proclamation should it by any chance prove irksome or otherwise objectionable. He laid these views before the meeting as the outcome of long, and what he believed to be unbiassed, consideration of the matter, and he felt he could conscientiously support Dr. Rennie's proposition. He was glad the matter had come up for discussion, and he was sure the resolution arrived at by the Branch would have a material influence upon the fate of any legislative measure dealing with the subject.

In reply, Dr. Sinclair Gillies pointed out that the carrying of the amendment would defeat his scheme, which, though partial, was practical. Legislation would take from one to two years at least to carry through. Were they in the meantime to sit still, doing nothing but talk, as they had done since 1895, while the unfortunate patients died in the metropolis at the rate of 500 per year? His original motion had included compulsory notification, but he had modified it, fearing that the introduction of that subject would lead to considerable difference of opinion, and so further delay in making any practical beginning. The scheme he had proposed would do away with the necessity of a consumptive dispensary. The work of such an institution could be equally well performed in the out-patient departments of the metropolitan hospitals if the honoraries would help, and so the establishment of another charity would be obviated. The most crying need of the consumptive at present was a home for advanced cases. Whatever the result of the vote, let them go as a body to the Board of Health and ask them to give them accommodation for these cases.

Dr. Rennie's amendment was then put to the meeting and carried.

Dr. Worrall proposed :—1. "That this meeting of the New South Wales Branch of the British Medical Association respectfully request the Board of Health to take steps to provide for the compulsory notification of pulmonary tuberculosis." 2. "That it be an urgent recommendation that hospitals for advanced cases of phthisis should be erected without delay."

This was seconded by Dr. Hankins, and carried.

The regular monthly meeting of the Branch was held at the Royal Society's Room on Friday, October 28th 1904; Dr. MacCormick in the chair. There were 35 members present.

The minutes of the previous meeting were read and confirmed.

The President announced the election of Dr. Hipsley, of the Children's Hospital, as a member of the Branch.

Dr. Mills exhibited a patient suffering from aneurism of aorta.

Dr. Mills read notes of a case of hydatid of the brain, also Dr. MacCormick's notes on the same case (p. 549.

Dr. Crago said he congratulated Drs. MacCormick and Mills on the success of their case. He had operated on two cases of cerebral hydatids which had been diagnosed and located by Dr. Rennie, and was pleased to say that both patients were alive. In his cases he had followed the practice of Ballance and Horsley, and had done the operation in two stages so as to lessen shock. In the first stage he had trephined the skull and aspirated the cyst; then a few days later had incised the dura mater and a thin lair of brain substance, and removed the cyst wall. He especially agreed with the advice at the end of the paper to avoid drainage of cerebro-spinal fluid. In his first case he inserted a drainage tube into the cavity and left it there for 24 or 36 hours, and he blamed that for a hernia cerebri that followed. In his second case he did not drain the cavity at all, and the patient made a rapid and complete recovery. He (Dr. Crago) only used an inch trephine, and slightly enlarged the opening with gouge forceps at the second operation, so that the defect in the skull was very slight. He had no personal experience of the large "scalp and bone flap," as made by Dr. MacCormick, but could understand the advantage of it in exploring the surface of the brain where exact localisation was impossible.

Dr. Hinder thought the shock was due to the amount of cerebro-spinal fluid lost. In Dr. Crago's cases he thought it very probable that some adhesions formed between the two stages of the operation, shutting off the cerebro-spinal fluid. He would like to ask Dr. MacCormick how long he kept in the drain ?

Dr. Fiaschi thought the case of hydatid of the brain exceptionally successful, inasmuch that sight was saved besides life. In the greater part of the cases recorded sight had not been saved. For this very important reason he had for some years advocated early exploratory puncture, by Souchon's method, in all cases in which there were reasons to suspect an intracranial hydatid. And on this point it might interest them to hear that some time ago he had in the Sydney Hospital a boy with advanced optic neuritis, in whom they suspected an intracranial hydatid. As the localising symptoms were not clear, he decided to explore the right hemisphere by puncture. He started from the upper part of the frontal region, and through a small hole made in the skull with a watchmaker's drill he passed a fine aspirating needle, and as luck would have it. he struck a hydatid cyst close to the surface. As at that time the dread in such operations was that the sudden withdrawal of fluid and inability of the brain substance to rapidly expand might cause hyperthermia and death. he thought it better to simply kill the hydatid without emptying it. For that purpose he withdrew about half an ounce of hydatid fluid, unscrewed the syringe, plugging the outer opening of the needle, filled up the syringe with 1 in 2000 solution of hydrarg. biniodide, screwed it on the needle again, injected that solution in the cyst cavity, and then closed the small needle opening. Patient made a good recovery, and improved in every way except the sight. After some months he began to get bad again, and returned with the same symptoms as before. Thinking that the cyst had filled up, Dr. Fiaschi again punctured in the same spot as before, but found no fluid ; and as this time he had made a trephine opening, he was able to ascertain that he was on sound brain substance. Convinced that there must be a hydatid, he then palpated carefully the skull, and at the back of the right parietal region he found a slight bulging, with apparent undue elasticity of the bone. He reflected a horseshoe flap down, and found the bone so attenuated that he was able to make a sufficiently large opening with a strong pair of scissors and cutting pliers. Through this he emptied a large hydatid cyst in the usual way. The boy recovered, minus the sight, and was well when last heard of. Our two authors, in promptly interfering, acted wisely and saved their patient from that terrible calamity, blindness.

Dr. MacCormick said the "shock" was certainly severe for some hours. As there were occasional "gushes" of cerebro-spinal fluid, he had the drainage tube withdrawn from the cavity the same afternoon, and withdrawn from the wound altogether the following morning. He said there was considerable difficulty in distinguishing between hydatid and cerebro-spinal fluids unless you found the hooklets of the former; and at least one case that had been reported as hydatid of the brain turned out to be a dilatation of a lateral ventricle with cerebro-spinal fluid. He thought Dr. Fiaschi's method of aspirating the cranial cavity might be useful in some cases. The great advantage of the large flap, as made in his case, was that by tilting the head you could turn out the cyst intact and avoid the risk of infecting the cavity with scolices.

Dr. Charles MacLaurin read a paper on lumbar hernia, with notes of a case of strangulation (p. 559.)

Dr. Fiaschi asked Dr. MacLaurin if his patient presented no history of recent or remote injury to the abdominal walls corresponding to the seat of hernia? Dr. Braun's theory that lumbar hernia occurs through the cutaneous nerve openings in the aponeurotic origin of the latissimus dorsi muscle cannot be readily accepted. Granting that on the argument by analogy such a theory has some speciousness of truth, for they know that sciatic hernia follows the course of the sciatic nerve, and that even obturator and femoral herniæ might with less force be said to follow the course of nerves, still in the case of lumbar hernia the cutaneous nerves referred to are so small that it was hard to believe their openings afford room for the development of hernia. He favoured more the theory that all lumbar herniæ were the result of trauma, which at some recent or remote date had weakened some spot in the lumbar walls.

Dr. Maitland said that lumbar hernia must be a rare condition was impressed upon them when they considered how seldom a hernia was seen after a kidney operation, where there was wide division of the lumbar fascia and abdominal muscles. In view of this fact he was unable to swallow the theory that it was possible to get a lumbar hernia along the course of one of the very small lateral cutaneous nerves. If the hernia followed a nerve, why then did it not follow either the last dorsal, the ilio-hypogastric, or the ilio-inguinal, instead of the smaller lateral branches ? He was quite aware that that theory was mentioned in some textbooks on the subject, but it seemed to him to be far more rational to believe that the hernia came through muscular weakness, either congenital or following trauma.

Dr. Gordon Craig considered that Dr. MacLaurin's explanation of the etiology of the non-traumatic cases of lumbar hernia was a rational one. As to treatment, he would suggest the suitability of the silver wire framework, as used in cases of ventral hernia.

Dr. MacLaurin, in reply to Dr. Fiaschi, said there was no history of any injury. He adhered to the theory that the hernia came through the nerve-holes.

Mr. Thring read a paper on "Myomectomy during Pregnancy" (p. 557.)

Dr. Maitland did not adversely criticise Mr. Thring's paper, but would ask a question about the case in which the writer said "that on the fourth day the wound opened from some cause." Then it seemed to him (the speaker) that, provided sepsis was not present, the only other cause could be that the catgut had been too rapidly absorbed. This sometimes did happen, and he thought it was as well in addition to layer stitching of the abdominal wall to use through-and-through supporting stitches of silkworm gut. Had Mr. Thring used these in the case mentioned ?

Dr. Worrall said it was to be regretted that such an important paper came on so late in the evening. He congratulated Mr. Thring upon his successful results. With regard to the bursting open of the abdominal wound in the last case referred to, this was the fifth or sixth instance of the kind which had come under his notice within a comparatively short period. In his experience this accident was most certainly provided against by the method of suturing which he adopted, viz., through-and-through silkworm gut sutures and separate catgut for the anterior aponeurosis. The anterior aponeurosis was the mainstay in the prevention of hernia ; and if all the structures were brought together by this through-and-through suture, and special pains taken in addition to coapt the anterior aponeurosis, the danger of the wound reopening or subsequent hernia were reduced to a minimum. Let any surgeon try this method in 50 cases, and "layering" in another 50, and note which series gave him the least trouble and ensured the firmest cicatrix. In myomata complicating pregnancy, which came under the surgeon's notice, in his experience hysterectomy was more often required than myomectomy. This was no doubt due to the fact that the cases suitable for myomectomy presented often few symptoms, while those requiring hysterectomy were forced by the urgency of the symptoms to seek relief. For intramural growths myomectomy was more dangerous than hysterectomy. He would be inclined to restrict the former to pedunculated and subserous growths. In performing myomectomy it should always be remembered that nodules not palpable might be present, and subsequently develop, necessitating another operation. He had seen calamitous results from following the advice of some text-books that growths in the lower uterine zone, blocking the pelvis, should be watched in the hope that they would rise up during labour, or might be forcibly pushed up under anæsthesia. Myomata were easily injured, with resulting gangrene. Operation, therefore, was far less dangerous than expectant treatment in this class of case. He agreed with Mr. Thring's conclusions.

Dr. McCulloch said in the school he was educated in it had been taught that there should be no operative interference with pregnant women unless the tumour was likely to interfere with delivery. The uterus would stand an immense amount of pulling about in some women without aborting, while in others the least amount of interference would cause abortion. Mr. Thring's record of five cases showed one abortion ; probably by the non-operative treatment the result would have been the same.

Dr. Gordon Craig asked Mr. Thring, referring to his first case, if he would operate again under similar conditions, and if he would advise that all fibroids discovered during pregnancy be operated upon, leaving out of the question those cases which were causing mechanical obstruction to a safe delivery of the child or pain from pressure or local peritonitis ? He (Dr. Craig) felt that gynæcologists saw more of the evil results of fibroids during pregnancy than general practitioners, who were inclined to use the expectant plan of treatment apart from those cases where mechanical obstruction was involved.

Mr. Thring said, in reply to Dr. Maitland : The method of closing the abdominal incision adopted in all the cases was similar—*i.e.*, a continuous suture of chromicised gut through peritoneum and posterior muscular aponeurosis, mattress sutures through the anterior layer of the rectus sheath of thicker chromic gut, no sutures through muscle fibre, a continuous suture of fine plain gut drawing together the edges or surfaces of the deeper layer of the subcutaneous fat close down upon the aponeurosis of rectus. This prevents the so-called "dead space" and accumulation of serum therein. Finally, a continuous suture of plain gut through the skin edges, not tied at either end. To Dr. Worrall: The principle to be followed was to remove the pathological condition, leaving undisturbed as far as possible normal conditions, as, for instance, the pregnant uterus. He (Mr. Thring) had not found myomectomy to be an operation with a high mortality, and he had never operated a second time on the same patient for a similar condition. In three of the cases just recorded it was impossible to push the tumour up out of the pelvis, because of the attachments of the tumour to the cervix and lower uterine segment. Had they been left, and pregnancy continued, they must have caused obstruction to the descending fœtal head during labour. To Dr. Craig : Had he been quite sure that the tumour in case No. 1 was a fibroma and not, as appeared possible, an ovarian cystoma, he would most probably have left it alone until after delivery of the fœtus. Had it been an ovarian cyst there would have been the possibility of a twist of the pedicle taking place before or during labour. To Dr. McCulloch : It was unfortunate for Dr. McCulloch that he had selected that particular case—*i.e.*, No. 4—for criticism, because that one, most of all, called for interference, as was shown by the rise of temperature, pain, etc., and in the specimen, after removal, by the signs of rapid degenerative and necrotic change which were demonstrated. In three of the other cases there must have been obstruction to delivery at term. The patient in each instance was saved from this risk, and also from the other dangers accompanying the presence of a rapidly growing fibroid. So great an authority as Tarnier speaks in no uncertain terms of the great increase in the post-partum death-rate of both mothers and children in cases of pregnancy complicated by fibroids. Dr. McCulloch said he preferred to adhere to the teaching of 20 years ago. Probably if he returned to his old school he would find that the methods now advocated there had changed, let us hope, for the better.

Victoria.

The ordinary monthly meeting of the Victorian Branch of the British Medical Association was held at the rooms Collins-street, on Thursday evening, October 13th ; the Vice-President occupied the chair, and Drs. Beckett, Esler, Vance, Hodgson, Henry, Cuscaden, were present.

Apologies were read from the President (Dr. Weigall) and Dr. McAnsh.

Dr. Henry read a paper on "Dental Decay as a Factor in the Production of Disease." (Page 563.)

Dr. Cuscaden quite agreed with Dr. Henry in his remarks, and considered that dental troubles were the cause of many of the ills that flesh was heir to, and particularly the cause of digestive troubles ; and he was most particular in seeing what condition his patients' teeth were in. He also drew attention to the natives on the West Coast of Africa, whose teeth were always in excellent condition; the reason for this being the great care that the negroes paid to their teeth, always cleaning them, after eating, with a kind of fibrous material called a chew-stick; and yet these people lived on yams, sweet potatoes, and soft foods, all of which foods are supposed to be highly deleterious to the teeth.

Dr. Vance congratulated Dr. Henry on his paper, with which he agreed entirely. He related a case of typhoid where an artificial set of teeth had been overlooked, and not taken out by the nurse, with the result that the temperature was very variable.

Dr. Beckett considered that each generation would get worse and worse teeth, and that this was one of the penalties of civilisation; and if civilisation only lasted long enough there would be no teeth at all. Teeth were most important organs in animals, and he also stated that those animals that had bad teeth soon died out. The human race were not like animals in this respect, for they could obtain artificial teeth. Very often the exciting cause of cancer of the mouth, tongue, or lips could be traced to the teeth. He had noticed that a peculiar yellowish, rough, sordid condition of the teeth was pathological of malignant disease about the mouth and tongue, etc., and that with nice, white, clean teeth you never found an unhealthy condition of the mouth. He also drew attention to the numbers of young people with splendid teeth who died of phthisis.

Dr. Esler would like to ask Dr. Henry whether he considered it good or bad treatment to remove the primary teeth of a child of 4½ years suffering from badly decaying teeth and continuous toothache. Dentists did not like extracting teeth under such conditions for fear of crowding the mouth when the second teeth were erupting. He did not agree with dentists over the matter, as he considered that the pain and oral sepsis that the child was suffering from did much more damage to its constitution than removing the cause of this, even though it did cause crowding of the mouth. This latter condition could always be relieved by extracting any teeth in faulty positions. He remarked upon a case of a lady patient who had been in very delicate health for some years, and on the removal of numerous decayed teeth she gained two stone in weight in a very short time, and enjoyed splendid health afterwards. He also cited the cases of two children born of the same parentage; the first was brought up on the breast and had dreadful teeth, and the other was brought up on artificial food and had splendid teeth. He would like to ask Dr. Henry what reason he would assign for this.

Dr. Henry replied that he feared the chief object of his paper had been overlooked. He wanted an expression of opinion from members of how to prevent the decay of teeth, and the cause of the decay. Dentists had an idea that acid fermentation was the cause of the decay in teeth, but they did not seem to have any idea how to prevent it. In reply to Dr. Beckett, he considered that wild animals lead a harder life, and had no pampering; they took great care in masticating their food, and lived on hard, dry food, and this produced a hardier set of teeth. He considered that white bread was one of the causes of the decay of teeth, and an effort should be made to induce millers to sell whole meal, instead of the present white, highly pulverised flour, devoid of all its mineral constituents which were present in the oustide shell of the wheat. Young children ought to be persuaded to eat this kind of bread. He would suggest that the Minister of Education be asked to have an examination made of the condition of the teeth of the children in the State schools. In reply to Dr. Esler, he would like to know the weight of the child brought up on the breast when born and as it grew, also the condition of the maternal breast milk. He thought this might account for the condition of the child's teeth. Practically all children were born healthy, but a faulty method of upbringing was often the cause of much dental decay, *e.g.*, they were frequently corrected at their meals for all sorts of trivial matters, and they bolted their food and tried to get away from the table as quickly as possible, in order to be free from scolding. *Re* removing decayed teeth, he would suggest having all the decayed teeth cleaned up by a competent dentist, and the constituents of food supplied to the children that their systems required. With regard to the number of young people with excellent teeth dying of consumption, he could not say that he had noticed this, but would for the future pay particular attention to this point.

Dr. Esler read notes on "Expulsion of Fæces from Child's Mouth and Nose during Delivery." (Page 571.)

Dr. Bryant could not account for the condition of things described by Dr. Esler, unless a recto-vaginal fistula high up, and undiscovered, might account for it; but as Dr. Esler said that there was nothing of this sort to be discovered either before or after the delivery of the child, it seemed to him a most mysterious case.

Dr. Cuscaden, after thanking Dr. Esler for his paper, said that it was a physiological impossibility for a baby to vomit fæces. A baby's stomach would only hold a few drachms. He had never read nor heard of such a thing, unless the fæces had been taken from the mother during the child's delivery.

Dr. Vance would like to ask if the nurse had used a syringe for the vagina that had been used for the bowels. He thought the child must have picked the fæces up from the maternal vagina during delivery.

Dr. Esler, in reply, stated that he was positive that the fæcal matter vomited by the baby was quite different to what the mother passed, and that it was not meconium either. He had been quite unable to find any trace of a recto-vaginal fistula either before or after the delivery. He had never seen, heard, or read anything like this, although he had conducted a very large midwifery practice during the last 18 years; but he did not profess to explain this case; he only reported it for the sake of discussion and as an interesting case.

Queensland.

A meeting of the Branch was held on November 4th; Dr. Byrne in the chair.

Dr. Little exhibited a perforating ulcer of the stomach with punched-out circular opening on peritoneal surface, and little destruction on the gastric surface situated close to pyloris anteriorly.

Dr. Clatworthy read notes of the case. Was called at nine o'clock on morning of 12th September to see W. M., aged 30, who was said to have been in great pain all night. He stated that last evening after riding home on the bicycle he was attacked by a pain, and went to the closet thinking he wanted to defæcate, but was unable to pass a motion. He then vomited once, but threw up no blood, and there was no repetition of the vomiting, nor did he feel sick. During the night he was given two glycerine injections, which brought away small motions. When I saw him he was lying on his back breathing quickly and jerkily. The abdominal wall was universally contracted and resonant. Temperature (in mouth) normal, pulse 120. Complained of pain and flatulence, which he was unable to get rid of, He said, " It feels just like the cramps, and the wind keeps me from breathing properly." I gave ½ grain of morphia with atropine, ordered turpentine enema and warm fomentations. Three hours after I saw the patient again. He was quite cheerful, said the pain had gone, but that there was still a tender spot over the epigastrium. He also moved about the bed with apparent ease, wanted to be allowed to get up, and asked me what he might have to eat. At 12.30 that night his brother came to say that the pains had come on again since 9 p.m. When I arrived he was pulseless and hopelessly ill. I gave morphia for the pain and sent for Dr. Little, who saw him with me. We decided that there had been perforation, probably, of a gastric ulcer and that surgical interference just then was useless. He died half-an-hour after we left the house. *Post mortem.*—Dr. Little and I opened the abdomen about seven hours after death. There was extensive peritonitis with effusion of lymph and commencing adhesions. On the anterior wall of the pyloric end of the stomach was a small round punched ulcer free from adhesions. The strange part of the case is this, that all day the patient was easy and cheerful. He not only moved about in bed, but (his brother states) got out to pass water on two occasions, and was asleep from five to seven in the evening, that is eight hours after he had morphia. Dr. Little will show you the specimens which he removed at the post mortem. His previous health was stated to have been excellent. He occasionally took a dose of salts for indigestion, but had consulted no medical man.

Dr. LITTLE read results of an inquiry kindly supplied by Dr. Ham, who was unable to be present. (To appear in a future issue.)

Dr. LITTLE pointed out that in perforation of the stomach the attack was acute, and Dr. Ham's statistics showed that hæmorrhage was the exception.

Dr. ROBERTSON said the chronic ulcer and perforating ulcer were quite distinct and the pathology different. The acute perforating ulcer was caused by occlusion of an artery and necrosis, while the chronic ulcer of the stomach was caused by surface changes eating slowly through, and as they came in contact with blood vessels already congested causing hæmorrhages, which did not occur in the other as the blood supply was cut off.

The PRESIDENT thought there was constant danger of perforation in the chronic ulcer, and that it frequently took place, and this danger had to be very seriously contemplated in treating chronic ulcer of the stomach accompanied by hæmorrhage more or less profuse.

Dr. LITTLE agreed with Dr. Byrne that there was always danger of perforation in chronic ulcer of the stomach, but when called to a case of perforation you must not be misled in your diagnosis and hesitate because there had been no prior symptoms of ulcer with hæmorrhage, because in acute perforating ulcer, which was the most common cause of perforation, you had no hæmorrhage and of tenonly slight, if any, symptoms at all.

Dr. OSLER seemed to agree with Dr. Ham's conclusions. He speaks of acute perforating ulcers, with or without a period of brief gastric disturbance, causing perforation and speedy death, and it was the importance of drawing attention to this that made the exhibit and notes so interesting.

Infantile paralysis exists at present in Brisbane. Several cases are now being treated at the Children's Hospital.

REPORTS OF OTHER SOCIETIES.

The Sydney and Suburban Provident Medical Association.

The annual meeting was held at 121 Bathurst-street, Sydney, on October 25th; Dr. Worrall in the chair. There were also present: Drs. Palmer, J. Harris, Hankins, O'Hara, Binney, Crago, Jamieson, Corlette, W. H. Read, Perkins and Ludowici.

The hon. secretary's report showed that the number of members had increased each quarter. There are now 98 members of the active medical staff, 39 on the consulting staff, and 40 chemists. The working of the Association had been very satisfactory during the year, and the usual dividend at the rate of 17s per annum per member had been paid.

The hon. treasurer's financial statement showed a considerable improvement on the transactions of the previous year—£1124 7s had been paid to the chemists, and £2468 17s 5d to the active medical staff.

Dr. Crago considered the report and the financial statement to be highly satisfactory, and considered that the hon. secretary and hon. treasurer deserved the warmest congratulations on the result of the working of the Association during the year 1903-1904. The number of members and increase of income from quarter to quarter showed steady progress.

The election of office-bearers resulted as follows:—Dr. R. Worrall was re-elected president; Dr. E. H. Binney, hon. treasurer; Dr. A. A. O'Hara, hon. sec.; Drs. Hankins, Jamieson and Rennie to be representatives of the consulting staff; Drs. Perkins, O'Gorman Hughes and Crago, representatives of the western suburbs, eastern suburbs, and the British Medical Association respectively. Dr. Edward Ludowici was appointed to the general committee, *vice* Dr. West. With this exception the late general committee was re-elected as follows: Drs. J. M. Gill, D. Luker, A. L. Levy, C. E. Corlette, W. H. Read, G. D. Menzies, H. S. Stacy, A. A. Palmer, and John Harris.

OBITUARY.

W. R. C. Erson, L. *et* L. Mid., F.P.S. (Glas.), L.S.A. (Lond.), 1880.

We regret to record the death at Coolgardie, West Australia, of Dr. W. R. C. Erson, who was formerly for many years a well-known and popular practitioner in Auckland. The deceased came out to New Zealand about 19 years ago, and settled at Onehunga. For several years he was Mayor of that borough, and took a very prominent part in local affairs. About three years ago his health gave way, and after a short residence at Rotorua he went to West Australia, where he remained up to the time of his death, which occurred somewhat unexpectedly. The deceased leaves a widow and four children.

J. F. Menzies, M.B., Ch.B., L.R.C.S. (Eng.), Milton, N.Z.

We regret to learn that Dr. J. F. Menzies passed away on September 11th, after a very brief attack of acute pleurisy. The deceased gentleman started practice at Wyndham, where he remained for some years, and after disposing of his practice there to Dr. Rogers, he removed to Milton, where he resided until his death took place. He was recognised as a very skilful practitioner, and his genial nature won him very many lasting friends, who will sincerely regret his demise at such an early age.

REVIEW OF CURRENT MEDICAL LITERATURE.

MEDICINE.

Acute Lymphatic Leukæmia.

McCulloch (*Montreal Medical Journal*, August, 1904) records the following case of this nature: A man, aged 30 years, was admitted to hospital complaining of weakness, dyspnœa, gastric disturbances, and nervousness. His present illness had begun with sensitiveness to cold, persistent drowsiness, weakness, shortness of breath, and gastric symptoms. The latter consisted chiefly of flatulence and acid eructations, with slight tenderness on pressure. These symptoms were strongly suggestive of primary gastric disease, but later on the increasing weakness and progressive pallor suggested the diagnosis of leukæmia, which was confirmed by the blood examination. On admission to the hospital he presented a very marked pallor, considerable weakness, a greatly enlarged spleen, and distinctly palpable epitrochlear glands. In addition there was some dilatation of the heart. Examination of the blood revealed a leucocytosis of 12 to 15 thousand; the red cells numbered 1,400,000, and the hæmoglobin was 28 per cent. Examination of the stomach showed some slight motor insufficiency and an absence of hydrochloric acid; no evidence of lactic acid, and the total acidity was 11 per cent. A day or two later examination of stained blood films showed the leucocytosis to be almost entirely mononuclear in character, so that the diagnosis of leukæmia was emphasised. Five days before his death, examination of the blood showed the red blood cells to be 1,710,000; white blood cells, 37,600, and hæmoglobin, 19 per cent. A differential count of the leucocytes showed the polymorpho-nuclear cells to be only 15 per cent, large mononuclears 17 per cent., small mononuclears 67 per cent., eosinophiles and myelocytes 12 per cent. There were a very few nucleated red blood cells, chiefly normoblasts, and some distinct megaloblasts. Examination of the eye grounds revealed a neuroretinitis. The other glands increased in size during the next three days, and the disease proved fatal from a rapidly progressive heart failure a little more than three months after the appearance of the first symptoms. The disease throughout was accompanied by a markedly intermittent temperature, the oscillations varying from subnormal to 103·8°. No post-mortem examination was obtained.

Pernicious Anæmia and its Relation to Gastric Digestion.

C. G. Stockton (*The Journal of the American Medical Association*, July 16th, 1904) presents a report of some 25 cases of pernicious anæmia, and considers the disease from each of three standpoints: (1) The general condition of the patient; (2) the gastric digestion; (3) the blood. The patients almost uniformly complained of dyspnœa, weakness, and digestive disturbance referred either to the stomach or intestines. All of them presented marked pallor associated with the characteristic lemon-coloured tint of skin. The tongue was remarkably pale, usually showing a loss of epithelium. There was not much loss of weight. In a certain proportion of cases there was gastric distress; appetite variable, sometimes increased, sometimes completely absent. In the majority of cases there was complete achylia gastrica, no appreciable digestion taking place in the stomach; at times some improvement in digestion corresponded with improvement in the state of the blood. In cases where the secretion of hydrochloric acid had disappeared it did not return even when gastric motility had become apparently normal. From a careful study of these cases the author is convinced that the achylia gastrica is not an etiological factor in the development of pernicious anæmia for the following reasons: (1) When in a given case there is marked improvement in the state of the blood, though there is some evidence of improvement in the general nutrition, there has not been corresponding improvement in the gastric secretions; (2) in a large number of cases of achylia gastrica under the observation of the author during periods of several years in no single instance has there been an alteration in the blood at all suggestive of pernicious anæmia; (3) in a few cases where anæmia was marked there was not a complete achylia gastrica but merely hypochlorhydria; the failure of the gastric juice appears to be the result of the alteration in the blood. In reviewing the cases the author notes little evidence of marked cardiac disease. In patients engaged in heavy manual work the heart showed signs of slight dilatation, otherwise only the ordinary hæmic murmurs were heard. The liver has been found enlarged to a greater or less extent, the spleen sometimes increased in bulk, but not to a very great extent. Symptoms of spinal cord disease were present in the majority of cases. The personal histories of the patients were remarkable in showing an absence of previous severe illnesses; the family histories were also negative. In the discussion which ensued on this paper, Dr. R. C. Cabot, of Boston, Max Einhorn, of New York, and William Osler, of Baltimore, practically agreed with Stockton in his conclusion that the pernicious anæmia is not the result of achylia gastrica, and in the absence of hydrochloric acid in the stomach in a large percentage of cases. Some of the speakers emphasised the fact, however, that marked improvement ensued on the administration of comparatively large doses, from 25 to 60 minims, of hydrochloric acid, well diluted, after meals.

Angina Pectoris and Arterio-Sclerosis.

Osler (*The Journal of the American Medical Association*, September 17th, 1904) remarks that in a large proportion of cases of angina pectoris the attack is only an incident in the history of arterio-sclerosis. The pain in this disease is something *sui generis*, unlike in intensity any known variety, and while its association with coronary artery sclerosis is unquestionable, there is something additional, some other element, which, as yet, is not explained. In relation to arterio-sclerosis, there are four groups of cases of angina pectoris. First, the neurotic, in which in young persons all the symptoms of the disease may be present and death occur, and autopsy shows normal coronary arteries and neither local nor general disease of the arteries. Such cases are not common, but the author has reported an instance in a young man of 28, who had had for years paroxysms of cardiac pain of the most agonising form, who died in an attack. Secondly, the angina pectoris of young men associated with syphilitic arteritis, aortic or coronary, or both. This is a very distinctive form, occurring usually in men under 35 years of age. There may be no general arterio-sclerosis, but the lesion is either at the root of the aorta, or involves the sigmoid valves, or it may be confined to the coronary arteries. The anginal attacks, while severe, are sometimes relieved or even cured by the iodides. The paroxysms of pain may be the initial symptoms of aneurism of the first part of the arch of the aorta. Thirdly, the presenile cases, forming the great majority, in which the attacks are associated with coronary artery sclerosis as part of a widespread degeneration of the vessels. Hard work, mental more often than bodily, distress and strain of modern life, excesses in diet and drink, are the factors most concerned; though why in individual cases angina should occur it is impossible to say. There is another element, as yet unknown, since in only a very small proportion of cases of coronary artery sclerosis does angina occur. Fourthly, the senile group. After 70 years of age angina is not an infrequent manifestation, a sort of terminal event in the cardio-vascular degeneration. Death often results from an attack, or there may be a series of paroxysms preceding a final breakdown.

Banti's Disease.

Anderton (*Lancet*, October 1st, 1904) records the case of a married woman, 46 years of age, who first came under observation for severe epistaxis. She was extremely anæmic and had an enlarged spleen. Her only previous illness was an attack of rheumatic fever when she was 25 years of age. There was no history or sign of syphilis, she was not alcoholic, and had never had malaria. There was marked pigmentation and much muscular wasting. The abdomen was distended by the greatly enlarged spleen, but there was no ascites. The spleen was tender on palpation, its surface smooth, and consistence firm. The liver was only slightly enlarged and tender. There was no œdema, and no enlargement of lymphatic glands. Examination of the blood showed 2,830,000 erythrocytes, 4640 leucocytes, and hæmoglobin 36 per cent. Her digestion was much impaired; she was always thirsty, generally constipated, but sometimes had diarrhœa; melæna only occurred a few times. The urine was scanty and contained urates. As the disease advanced she complained much of pain over the spleen, the liver increased in size, and she became jaundiced. Then ascites and œdema appeared. A blood examination a few days before death showed erythrocytes 1,140,000, leucocytes 3200, and hæmoglobin 20 per cent. She died from exhaustion five years from the time the spleen was first found to be enlarged. At the post-mortem a large amount of ascitic fluid was drawn off from the abdomen. The spleen weighed 9 lb., and there were firm adhesions connecting it with the surrounding organs. The surface was smooth, and consistence firm. On section it appeared deep red in colour, and the fibrous stroma was much increased; the capsule was much thickened. The liver was enlarged, yellowish-brown in colour, and its surface smooth. On section the lobules were seen distinctly marked out. Stomach walls were very thin and pale. Lymphatic glands were not enlarged, and bone marrow appeared normal. Other organs normal. Bacteriological examinations of the blood before and after death gave negative results.

Hæmatoporphyrinuria not due to Sulphonal.

G. L. Thornton (*Lancet*, September 24th, 1904) records a case of this disease occurring in a man 45 years of age, of good social standing, and no occupation. The patient's family history was good, and there was nothing suggestive in his previous personal history. His illness began with griping pain in the abdomen, nausea, and slight diarrhœa. When seen by the writer the temperatare was normal, his pulse 54 and of high tension. Nothing was noted of importance on examination of the chest; there was no evidence of enlargement of the liver or spleen, but some slight tenderness along the ascending and transverse portions of the colon. The next day the writer found that the motions consisted of blood-stained mucus and bright blood. The patient was much alarmed at the colour of the urine, which was that of dark port wine. Subsequent examination of a sample gave the following results:—Amount in 24 hours less than normal, port wine colour, feebly acid reaction, specific gravity 1028; albumin, slight cloudiness on heating, but no reaction with cold nitric acid or with Esbach's solution; sugar, nil. Chemical and microscopical examination showed an absence of hæmaglobin and of blood cells. There was no doubt that the pigmentation was due to the presence of hæmatoporphyrin. On seeking for a cause for this condition it was ascertained that the patient had not taken any sulphonal or other drug likely to cause it. However, it was obvious that the patient was suffering from a colitis, and the writer gives Osler as his authority for the statement that hæmatoporphyrinuria occurs after intestinal hæmorrhages. The further progress of the case was uneventful. In a few days the colitis subsided, and the urine resumed its normal appearance. The writer reviews the literature of the subject, and considers that in the case he records the most obvious explanation would be that a somewhat severe hæmorrhage had taken place high up in the colon, as there was never at any time tenderness over the sigmoid flexure, and nothing abnormal could be detected on rectal examination. This case agrees with the majority of the cases reported by Dr. Garrod at a meeting of the Pathological Society of London this year, but differs in that there was no history of the symptom having been previously present, at any rate in such a degree as to attract the attention of the patient.

PATHOLOGY.

Changes in the Nervous System after Parathyroidectomy.

Russell (*Johns Hopkins Hospital Bulletin*, June, 1904) records the results of his examination of the brains of several of the animals of a series of experiments performed by W. G. MacCallum, with a view of determining whether the degeneration of the brain cortical cells whch ensues after extirpation of the parathyroid glands was primary. It has been shown by Gley, Vassale and Generali, and others, that dogs, after the extirpation of the parathyroid glands die usually in the course of a few days of a generalised tetany. Vassale and Donaggio made a series of examinations of the spinal cords of such dogs. In six of these, after the cord had been kept in Muller's fluid for from three to five months, they found a macroscopical alteration, thought to be a degeneration, in the crossed pyramidal tracts, identical in situation with that following ablation of the motor cortex, and also a similar change in the posterior tracts. This degeneration, so clearly visible to the naked eye, could not be demonstrated microscopically with Marchi's stain or with Weigert-Pal method. With a 1 per cent. solution of nigrosin they were able to distinguish a swelling and granular appearance of the axis cylinders, and the myeline sheath showed atrophy, and did not take the stain well. They did not examine the cortex, and left it an open question as to whether the degeneration was a primary one, or secondary, to some atrophy of the cortical cells. According to the author, fairly uniform, even if slight, alterations in the cells of the central nervous system are to be found when, after parathyroidectomy, dogs succumb with symptoms of tetany. These changes are as follow:—1. Chromatolysis, in which the chromophile granules, especially in the immediate neighbourhood of the nucleus, become reduced to such a fine state of division as to give a diffuse blue stain with Nissl's method. In the cases in which tetany is of longer duration, the change may be such that isolated chromophile bodies are no longer to be distinguished in the cell. Sometimes it is possible in these cases to trace the protoplasmic processes to a great distance from the cell. 2. In most severe cases there is in many of the large pyramidal cells a change which leads to their great shrinkage and distortion, the cell protoplasm becoming so densely stained as to hide the nucleus. 3. The small neuroglia cells, of which one or two are asually associated with the pyramidal cells, may become more numerous, so that each nerve cell is surrounded by a group of them. This appearance has been described by Quervain and others as due to an accumulation of leucocytes in the spaces about the nerve cells. The function of these neuroglia cells is thought by many to be of a phagocytic nature. Similar alterations, though less intense, have been found in the medulla and cord. The author concludes that these alterations in the nerve cells afford an anatomical basis for the functional changes which led to the tetany.

Multiple Non-Inflammatory Necrosis of the Liver.

Oertel (*Journal of Medical Research*, July, 1904) describes the microscopical appearance of the liver met with in a man aged 30 years, who died in hospital, after only five days' illness with intense jaundice and delirium, from œdema of the lungs. He had been a very heavy drinker. On macroscopical examination the liver was somewhat larger than normal; weight, 1770 grams, and dark yellow colour throughout. It was smooth on the surface, firm on section, and leathery; lobules yellowish pale, in spots brownish, their outlines indistinct and irregular. In some places the liver presented a diffuse, yellowish pale, leathery tissue, in which structure was absolutely lost, but always firm, nowhere any softening; no connective tissue bands visible. Microscopically there are to be seen small irregular streaks of pale, poorly staining tissue, separated by better stained areas. These areas are found to correspond to atrophic or even necrotic portions of liver lobules, usually with a free precipitation of bile in the form of large and small light yellow to dark-brown granules. There appears to be a primary atrophy of the cell protoplasm, preceded by a moderate parenchymatous swelling. The nucleus becomes poorer in chromatin and atrophic, the cells become vacuolated, some contain fat drops, and the cell body then usually encloses smaller or larger granules of bile. Ultimately the cell disappears, and only a fine reticulum remains, with free bile pigment. The condition is most pronounced around the central vein, which appears well dilated. Towards the periphery the cells have retained their integrity, but most of them show beginning turbidity and swelling of the protoplasm, with moderate fatty infiltration. Such areas are present in immense numbers in various portions of the liver, varying in shape and size, and are apparently directly continuous with normal liver tissue. They are not surrounded by pus or any other infiltration; there is no inflammatory engorgement of vessels, no connective tissue growth, old or recent—in fact, no evidence of any reaction of the liver tissue at all. In the portal spaces the portal vein is generally dilated, its walls thickened, and its neighbourhood densely infiltrated with small round and connective tissue cells. The same is true of the bile ducts and the hepatic vessels. The connective tissue formation is confined entirely to the structures of the portal spaces; at no time is there even an attempt to invade into or around the lobules. In some portions a proliferation of bile ducts is seen, and may reach a considerable degree. The author discusses the pathology of this case fully, and concludes that there exists a non-inflammatory destruction of the liver, which may be regarded as a pathological entity, in the form of multiple atrophic to necrotic foci of the liver lobules, with bile and blood stasis, and therefore associated with icterus. Evidence indicates that this is probably due to the entrance of a bacterial irritant, either by the bile ducts or the blood vessels. The reaction of the liver to this invasion can only be found in localised cirrhosis, most pronounced around bile ducts and vessels, and a proliferation of bile ducts. The sclerosis appears to take its origin around the places of entrance. The disease seems to occur in a previously severely damaged liver, with bile stasis, resulting from severe alcoholic excess.

PÆDIATICS.

Delayed Chloroform Poisoning in Children.

Stiles and McDonald (*Scottish Medical and Surgical Journal*, August, 1904). Although the occurrence of obstruction in delayed chloroform poisoning has long been recognised in Germany, Dr. Leonard Guthrie was the first to direct attention to the subject in this country. His first paper, published in the *Lancet*, vol. 1, 1894, was entitled " Some Fatal After-Effects of Chloroform in Children." In a second paper, published in the same journal July 4th, 1903, Dr. Guthrie brought forward further observations in support of his contention that the fatty changes met with in delayed chloroform poisoning are not due to the action of chloroform alone. He maintains that the liver is in an advanced state of fattiness previous to the administration of the chloroform, and that the latter, by diminishing oxidation, already deficient, determines the state of functional inadequacy, which sets up an auto-intoxication due to the accumulation of ptomaines or toxines. The clinical history and pathological changes in two children who died—the one three days after the operation for the radical cure of hernia, the other 26 hours after an osteotomy for knock-knees—are then described. The symptoms and post-mortem findings corresponded closely with those described by previous observers. It is shown that death could not have resulted either from carbolic acid poisoning, from fat embolism, or from sepsis. In the osteotomy case the fat emboli in the lungs were only present in the smaller vessels, and were so scarce that death could not be attributed to them. It was interesting to note that some of the sub-lobular and hepatic veins contained a considerable amount of oil, for the most part in free droplets, but occasionally in the interior of what were evidently disintegrated liver cells. No fat was demonstrated in branches of the hepatic artery, nor could any be discovered on the aortic side of the circulation. It was evident, therefore, that the fat in the lungs was derived from that which had gained access into the hepatic veins from the disintegrated liver cells. The possibility of sepsis is carefully considered. Microscopical specimens (obtained from a child who died from a gangrenous inflammation of the œsophagus following operation for perityphlitis) show how closely the changes in the liver, kidneys and heart resemble those which are said to be characteristic of delayed chloroform poisoning. In neither condition were there any inflammatory changes in the glomeruli. The same degenerative changes are sometimes present in patients who have died after operations for septic conditions, especially of abdominal origin, as are found in patients who have died from delayed chloroform poisoning uncomplicated with sepsis. In cases in which a septic element exists, the difficulty is to say how far the degenerative changes are due to bacterial toxæmia, and how far to an auto-intoxication determined by the chloroform. The question can only be settled by comparing the morbid changes found in the liver, kidneys and heart in patients who have died after operation (chloroform anæsthesia) from an acute infective surgical disease with those present in patients who have died from similar conditions without having undergone any operation, or who have been operated on under ether anæsthesia. Out of 3000 operations performed under chloroform in the in-patient department of the Royal Edinburgh Hospital for Sick Children during the past five years, there was the strongest evidence to show that three deaths (possibly four) were due to the after-effects of chloroform. Unfortunately the pathology and symtoms of delayed chloroform poisoning have, up to recently, been either overlooked or wrongly interpreted, so that the mortality cannot be estimated until the condition has been generally recognised by surgeons and pathologists. With one exception the cases recorded in this country have all occurred in children while under treatment either in the Paddington Green Children's Hospital or in the Royal Edinburgh Hospital for Sick Children, these being two hospitals where special attention has been directed to the condition. In Germany, on the other hand, almost all the reported cases have been in adults, and the greater proportion of these have occurred after a somewhat severe operation for infective abdominal conditions, such as suppurative salpingitis, appendicitis, etc. The element of sepsis with which these cases are complicated renders it difficult, in the present state of our knowledge, to say how far they help to solve the problem of delayed chloroform poisoning. If it could be shown that the critical condition (persistent vomiting of a more or less hæmorrhagic type; small, rapid and often irregular pulse; extreme restlessness, collapse, etc.) in which we occasionally find patients 48 hours or so after operation is in any way brought about by degenerative changes set up by the chloroform, the question of substituting ether will have to be seriously considered, even in the case of children. Unfortunately, however, the mortality in children from the effects of ether on the respiratory tract would probably be as great, if not greater, than that due to the after action of chloroform. Details were given of six out of fourteen experiments performed on rabbits to ascertain the effect of chloroform on the tissues. In experiments one and two, 2 c.c. of chloroform were injected into the subcutaneous tissue, while in experiments three and four, 3 c.c. and 4 c.c. of ether were injected respectively. Both the animals injected with chloroform died on the fourth day after the administration of the drug. The liver was extremely fatty, and to a less extent the kidneys and heart. There were numerous petechial hæmorrhages in the gastric mucosa, a point of considerable importance, since it has been shown that hæmorrhagic vomiting is one of the most important and constant symptoms of the delayed toxic action of chloroform. Both the animals injected with ether recovered, and the post-mortem examination revealed no fatty degeneration or other abnormality. Two experiments were performed on rabbits with the object of determining the action of chloroform on the liver, the drug being administered by inhalation in the ordinary way. As control observations, and in order to determine the condition of the liver at the time of operation, the experiments were begun by excising a small piece of liver under ether anæsthesia. A week later the animal was deeply anæsthetised with chloroform in the usual way for 25 minutes. The animal recovered, and was killed 48 hours after the administration. The piece of liver removed at the first operation (ether anæsthesia) showed a few small oil globules here and there; many fields, however, were entirely free from fat. The same liver examined, post mortem, after chloroform anæsthesia showed an extensive fatty change in the intermediate and central zones of all the lobules, thus corresponding exactly with what was found in the two children who died from delayed chloroform poisoning. The kidneys showed distinct cloudy swelling of the convoluted tubules, and here and there a distinct fatty change. The heart was not fatty. The sixth experiment was conducted on the same lines as the above, and gave similar results. In discussing the causation of delayed chloroform poisoning, a case was instanced which favoured the view held by Guthrie. It was that of a boy who died on the fourth day after the administration of chloroform for the purpose of examining a stiff knee-joint secondary to syphilitic disease of the lower femur. It was observed that the liver was considerably enlarged before the anæsthetic was administered. No incision was made, nor was any attempt made to forcibly straighten the limb. The patient came well out of the anæsthesia, but was very sick the whole day. On the day following, the vomited matter was distinctly coffee-ground, and this persisted until death. At first the patient was very restless, but subsequently he became more and more collapsed, and died in a semi-comatose condition. The liver and kidneys showed the same fatty change as occurred in the two cases of delayed chloroform poisoning above described. So long ago as 1860, Symonds, of Oxford, drew attention to the danger of chloroform in patients suffering from fatty liver. Dr. Guthrie has not brought forward sufficient evidence to show that the fatty change here described is the essential predisposing factor, and that the chloroform merely acts as the "last straw." It is much more probable that the fatty change was entirely due to the chloroform acting on a previously healthy liver; indeed, experimental evidence seemed to give strong support to this possibility. Moreover, while the changes in the liver are so striking, it must not be forgotten that other organs give evidence of a general toxic poisoning, and it seems hardly justifiable, therefore, to attribute the fatal result to hepatic insufficiency. Fatal cases of delayed chloroform poisoning are undoubtedly very rare, and it would appear, therefore, that idiosyncrasy is the main factor in their causation, just as it is in the irreducible minimum of deaths which occur during chloroform anæsthesia. As regards the treatment of delayed chloroform poisoning, the authors entirely agree with Guthrie in strongly condemning the use of morphia. Rectal and subcutaneous injections of normal saline solution and, if necessary, intravenous injections must be employed. If the vomiting be copious, the stomach should be washed out, and an endeavour should be made to get it to retain some calomel or grey powder. Cardiac stimulants must be used, but in moderation.

Hospital Collections in Melbourne.—Hospital Saturday and Sunday collections were held last month. The heavy rain somewhat interfered with the receipts. Church donations were heavy, and the collections in the parks and gardens, where the bands played selections, realised good sums. The total received was £6042, which is £1200 in excess of last year, and the largest collection since 1890.

CORRESPONDENCE.

London.

(FROM OUR OWN CORRESPONDENT.)

Alcoholic Criminal Responsibility—The King's Hospital for Officers—Medical Service of the Japanese Navy—The Imperial Cancer Research Fund—Gelatine Injections in the Treatment of Aneurism—Epsom College—The Sanitary Institute—The New Regius Professor at Oxford.

DR. SULLIVAN, Deputy Medical Officer of Pentonville Prison, read a paper on July 12th, before the Society for the Study of Inebriety, at the rooms of the Medical Society of London, on "The Criminal Responsibility of the Alcoholic." He remarked that though alcohol led to other forms of delinquency, it was in murder that its influence was most evident; in this country, at all events, it was the most important individual cause of that crime. In discussing legal responsibility, it would be practically convenient to adopt the same attitude, and to limit observations to cases of homicide. In such cases the question of responsibility arose in connection with three conditions: (1) Chronic alcoholic insanity; (2) delirium tremens; and (3) the dreamy mental state of morbid drunkenness. The objection to recognising alcoholic automatism as a morbid condition modifying legal responsibility appeared to rest chiefly on the fear that there would be therein some risk of abuse; any criminal, it was said, would only need to get drunk to secure immunity from his misdeeds. Those who entertained this fear, however, did not take account of the fact that the automatism of the alcoholic was really a very definite condition as to its character and as to its causation. Besides chronic intoxication, other conditions also predisposed to automatism under alcohol, and of these epilepsy, head injury, and insane hereditary taint were the most important. It was this constant relation to a definite neuropathic disposition that was the most distinctive fact about alcoholic automatism. And the recognition of this fact should go far to dispose of the fear that the admission of irresponsibility in such cases would lead to abuse. No one became mad when drunk who was wholly sane when sober. The admission of morbid drunkenness as a condition excluding full responsibility was especially desirable in that it would further the trend of public opinion to adopt preventive measures against the criminal alcoholic. It was, in fact, mainly as a means of eliminating potential criminals that the institutional treatment of ordinary drunkards was of use to the community. When, therefore, the chronic alcoholic had once shown the disposition to dream states with impulsive tendencies, especially homicidal or suicidal, he ought to be dealt with on the same footing as the impulsive epileptic—immune from ordinary punishment, but unfit for ordinary freedom.

As patron of King Edward VII's Hospital for Officers, the King has approved the list of the honorary medical staff appointed by the Prince of Wales, as president, and the Duke of Connaught as vice-president, the appointments being for five years from January 1st, 1904. Osborne House, Grosvenor Gardens W., was opened on April 6th last as a hospital for officers of both services, and a large portion of Osborne House in the Isle of Wight, the beautiful home of Queen Victoria, was simultaneously opened as a convalescent home for officers after treatment at the hospital. The medical gentlemen nominated are:—Consulting surgeons: Sir Thomas Smith, Bart., K.C.V.O., F.R.C.S.; Sir Frederick Treves, Bart., K.C.V.O., C.B., F.R.C.S., LL.D. Medical officers: Mr. Charles A. Morris, C.V.O., F.R.C.S.; Mr. Herbert W. Allingham, F.R.C.S.; Sir Thomas Barlow, Bart., K.C.V.O., M.D., F.R.C.P., LL.D.; Sir William Henry Bennett, K.C.V.O., F.R.C.S.; Mr. Tom Bird, M.R.C.S.; Mr. Anthony A. Bowlby, C.M.G., F.R.C.S.; Sir William H. Broadbent, Bart., K.C.V.O., M.D., F.R.C.P., F.R.S., LL.D.; Mr. Arthur H. Cheatle, F.R.C.S.; Mr. G. Lenthal Cheatle, C.B., F.R.C.S.; Sir Anderson Critchett, F.R.C.S. (Edin.); Dr. Alexander Crombie, C.B.; Dr. David Ferrier, F.R.C.P., F.R.S., LL.D.; Dr. P. Johnston Freyer; Sir Alfred Downing Fripp, C.V.O., C.B., F.R.C.S.; Mr. Rickman Godlee, M.S., F.R.C.S.; Dr. James Frederick Goodheart, F.R.C.P., LL.D.; Dr. Frederick William Hewitt, M.V.O., M.R.C.S.; Sir Victor A. H. Horsley, F.R.C.S., F.R.S.; Mr. George Henry Makins, C.B., F.R.C.S.; Mr. John Percy Mummery, F.R.C.S.; Dr. Frederick W. Pavy, F.R.C.P., F.R.S., LL.D.; Sir Frederick D. Powell, Bart., K.C.V.O., F.R.C.P., M.D.; Dr. William Aldren Turner, F.R.C.P.; Mr. Henry Roe Walker, M.R.C.S.; Dr. William Hale White, F.R.C.P.

Owing to the strenuous and untiring efforts of Baron Saneyoshi, Director-General, the medical department of the Japanese Navy is, as has been recently abundantly proved to be the case in other departments of public activity, in excellent working order. On the outbreak of the war, Japan owned two hospital ships, and two others have since been added, so that there is now one hospital ship availiable for each naval station. In Tokio there is a naval training school for surgeons and nurses. During 1903 there were enrolled in this academy 14 candidates to undergo a complete course of instruction, and nine staff surgeons for post-graduate courses. Those young surgeons, who have passed only the public examination without attaining the degree of physician, must attend the course in the Naval Medical Academy for one full year before they can be admitted to active service in the navy. The instruction in the academy consists of pathology, hygiene, military medicine, field surgery, and the transport of the wounded. The academy possesses a special library of manuals and journals in Japanese, English, French, and German; a Röntgen ray room; a collection of surgical instruments; projectiles and portions of projectiles, etc. The pathological department contains a good collection of pathologico-anatomical specimens. The chemical department is used also as an experimental station for food, and it trains specialists in that important branch. The bacteriological department is fitted out excellently, and is provided with ample room for students. The charité, or hospital, supplies clinical instruction and also trains nurses. It is under the protection of the Empress of Japan, and it consists of several buildings which are mostly connected by means of covered ways; it possesses every equipment known to modern medical and surgical science. The hospital ships are single-screw steamers of about 2300 tons capacity. They are painted white, with a broad red band and a red cross on their funnels. Besides a steam pinnace they carry several large rowing boats. These ships have many erections on their upper decks, main decks, and between decks. Fore and aft on the upper decks is a steam crane for taking in or disembarking wounded men through the spacious hatchway openings, while fore and aft, at the height of the main deck, a wide doorway is cut in the side of the vessel so that wounded men can be embarked direct from the boats. On the upper deck are the captain's quarters, the smoking-room, and ladies' saloons, all of which can be used by day by such invalids as can leave their beds. The promenade deck is broad and comfortable. On the main deck, besides the laundry, are two airy rooms, one of which contains 32 and the other 128 beds. The second-class saloon is the operating-room. It is painted with white washable paint, and has the electric light. The equipment consists of an iron operating table, apparatus for sterilising bandages, antiseptic solutions, and an iron washing table, with hot and cold water; the instruments are in the next room. Next to the operating theatre is a Röntgen ray room. It is painted black, and is lightproof. The accumulators are fed by the ship's engines. There is a supply of handy iron stretchers for carrying the wounded on board ship, and also of iron-framed couches, covered with canvas and on small wheels, so that they can be moved easily. There are baths and lavatory arrangements between the rooms for the sick and wounded. The quarters for the nursing staff are below; two larger rooms contain each 20 male nurses and 20 female nurses, and two smaller contain two chief assistants and two head nurses. All the rooms are airy, with numerous ventilators; they are heated by steam, are lighted by electricity, and have various electrical appliances. An iron room, situated below the water line, and airtight and watertight, is used as a mortuary, and can be kept cool by the machine used for making ice. Altogether these hospital ships can accommodate 250 sick and wounded men.

The Prince of Wales presided on July 8th at Marlborough House over the third meeting of the general committee of the Cancer Research Fund. The report presented showed that investigations on the nature of cancer, with a view to its early diagnosis and treatment, have been conducted upon an extensive scale. It also pointed out that cancer has been discovered to pervade at least all classes of the vertebrate kingdom, and to present constant characteristic features in all animals, but that it is only transmissible from one animal to another of the same species. Much has been done towards establishing a common biological law in explanation of cancer. The extent to which the disease pervades the animal kingdom indicates that geographical surroundings, geological formation, climate, food, and external conditions generally do not cause cancer; but the investigation of its occurrence in native races has still other important bearings which are receiving full attention. In acknowledging a vote of thanks for presiding, his Royal Highness admirably summed up in the following remarks the present position of the enquiry:—" In expressing my gratitude for the hearty manner in which this vote of thanks has been proposed and seconded by my noble friend Lord Strathcona, and Mr. Tweedy, and received by those who have kindly supported me here to-day, I wish to say what pleasure it gives me, as president of the Cancer Research Fund, to be present at this the third meeting of the general committee. The report which has been circulated among you, apart from its technical details, contains information which cannot fail to be of much importance to the pubilc generally, while we who are met here to-day have listened with interest to the excellent speech which has been made by Sir William Church in moving its approval and adoption. I know you will join with me in congratulating the executive committee, general superintendent, treasurer, and secretary on the satisfactory results of their labours during the past year. Without presuming to tread upon the ground of so essentially a technical character as that of the report, I may say that the progress of the records is of good augury, for I gather that the facts which have been ascertained, showing how cancer cells propagate themselves, may be of immense importance in obtaining a true knowledge of the disease. The investigations of the Cancer Research Fund have brought to light in an unexpected degree how universal the disease is. We now realise that it exists in all parts of the globe—in man and in animals, wild as well as domesticated. It has been said that this terrible scourge is the result of civilisation; but the research has obtained reliable evidence of cases, amongst others, of tribes in the Hinterland of our African Protectorates, far removed from any influence of civilisation. Recognising how world-wide the disease is, the Research Fund has wisely extended its inquiries to the farthest limits of the Empire, as shown by Dr. Bashford's report. Those endeavours have been fully seconded by the authorities in India, of our colonies, our various protectorates, and by the willing support of the Ministers at the head of these respective departments at home. I also wish to express my satisfaction at the hearty co-operation between the workers of the Research Fund and our friends in America and in the principal European countries. We owe much to the colonies. One of the earliest donations to the Fund came from the representative in this country of Canada. The Government of Hongkong has placed an annual sum of £30 on the Estimates as a contribution to the Fund. New Zealand sent us some of the first and most valuable material on the occurrence of cancer in fish. Considering the far-reaching interest in this subject, and that our organisation, to be successful, must be extended throughout the Empire, it was felt that further advantage to its labours might be secuerd if an addition to its title could be sanctioned; and I am glad to have this opportunity of stating that the King has approved of the Fund being known for the future as the 'Imperial Cancer Research Fund.' There will also be a further advantage in this designation, that the work of the Research Fund will be distinguished from other similar undertakings, most valuable and excellent as they are, but which, from their nature, are more local in their scope and limited in their resources. But the continued progress of the investigation makes ever increasing demands upon the Fund, and the treasurer's report points out that up to the present only 328 individuals have contributed to the Fund. I am sure no words are required to plead the cause of this great national work, so important to the whole race of mankind. There are few of us, unfortunately, who have not had brought home to us the terrors of this fatal, mysterious disease; and does it not behove us, in the interests of humanity and science, to assist to the utmost of our means those who are giving much labour and valuable time to the organisation of research, as well as to those who consent to devote their whole lives in endeavouring to determine what so far has proved to be one of the insoluble problems of human life?"

At a meeting of the Academy of Medicine, held in Paris on July 5th, M. Lancereaux showed three patients suffering from aneurism who had experienced a remarkable improvement under treatment by gelatine. In all three the volume of the aneurismal mass had become much reduced, and in one it had almost disappeared. Details were recorded of 15 other cases in which similarly favourable results had ensued. In the course of his remarks, M. Lancereaux stated that there was no danger in the treatment of aneurism by injections of gelatine, if the operator was careful to ensure the purity and thorough sterilisation of the gelatine. He had not experienced any mishap in the last thousand injections which he had administered. There can be no doubt that M. Lancereaux's experience, which is greater than that of any other physician in this method of treatment, justifies its more general adoption. In this country discredit has attached to it because of the occurrence of tetanus in several cases. This was due obviously to faultiness of method; but nowadays, when it is known that, by means of steam, gelatine can be thoroughly sterilised, there need be no hesitation in adopting Lancereaux's method. His results have, within recent times, received repeated confirmation in London and elsewhere.

In consequence of a mild outbreak of scarlet fever which occurred during the last few weeks of the summer term, the governors of Epsom College determined to omit this year the customary public festivities on Founder's Day. The prizes were distributed informally to the students on July 22nd, when the headmaster was able to make the gratifying announcement that the scarlet fever, which had occurred at such an inopportune moment, was of the mildest possible type, and that no fresh case had occurred for 13 days. The proper disinfection of the College and the rectification of any sanitary defects that may be found have been placed by the works committee in the hands of the local sanitary surveyor, in conjunction with the College surveyor, who will be engaged, as is usual, carrying out the cleansing and repairs undertaken at the end of each term. Amongst the honours gained direct from the school since the last Founder's Day are an open classical scholarship of £80 at Keble College, Oxford, and 11 passes at the last London matriculation examination, four boys being in the first division. The honours gained by former pupils during the same period have been numerous and varied. Dr. Alan Reeve Manby has received the honour of knighthood; Mr. H. J. Mackinder has been appointed by the Senate of the University of London director of the school of economics and political science; Mr. R. C. Lucas has been appointed headmaster of Wolverley Grammar School, Kidderminster; Dr. L. P. Phillips has been appointed professor of clinical medicine in the Medical School at Cairo and physician to Kasr-el-Aini Hospital; Captain G. T. Mair has been appointed to the command of the Artillery of the Nigeria Frontier Force; Mr. L. S. Wood has been appointed a junior inspector under the Board of Education; and Mr. E. M. Corner has been appointed assistant surgeon to St. Thomas' Hospital and to the Children's Hospital, Great Ormond-street.

The twenty-second congress of the Sanitary Institute was held this year at Glasgow, under the presidency of Lord Blytheswood. The proceedings commenced on the 25th July with a reception given by the Lord Provost in St. Andrew's Hall. This was followed by an inaugural address from Sir Richard Douglas Powell, who took for his subject "The Prevention of Consumption." On the following day the sectional meetings of the Congress were opened at the University. There was a large attendance of members and delegates from medical and municipal authorities in all parts of the country as well as from the Continent. The section of sanitary science and preventive medicine met under the presidency of Professor Glaister, who, in his opening address, dealt with the influence of smallpox hospitals upon neighbouring populations with regard to the spread of the disease, and stated that if the practice of vaccination and re-vaccination became universal and compulsory in this country, as it was in Germany, it would be possible after a few years for smallpox hospitals, as such, to fall comparatively into disuse. Other subjects discussed in this section were: "The Cause of Smallpox," "The Inspection of School Children," "Malaria and Consumption in the Tropics," "Infantile Mortality," and "The Sanitary Condition of Vessels." A series of conferences of special bodies—municipal representatives, engineers and surveyors to county and other sanitary authorities, sanitary inspectors, and medical officers of health—also took place, and included an important discussion on the hygiene of school life. A conference of women on hygiene, under the presidency of the Duchess of Montrose, was held, at which the physical training of women, the registration of nurses, and other such subjects were considered. The entertainment of the members and their friends was well provided for, and general satisfaction was expressed at the success with which the whole proceedings of the Congress had been attended.

It is officially announced that the King has been pleased to approve of the appointment of Dr. William Osler, F.R.S., to be Regius Professor of Medicine in the University of Oxford, in succession to Sir John Burdon-Sanderson, Bart., who has recently resigned the post. Dr. Osler was born at Bond Head, Canada, in July, 1849, and is the sixth son of the late Rev. F. L. Osler. He was educated at Toronto University and at McGill University, Montreal, where he took the degree of Doctor of Medicine in 1872. He also studied at University College, London, as well as in Berlin and Vienna. He is an LL.D. of McGill, Aberdeen, Edinburgh and Toronto Universities, and a few weeks ago, on the occa- of the visit of the British Medical Association to Oxford, he had conferred on him the degree of D.Sc. *honoris causa*. He was elected a Fellow of the Royal College of Physicians of London in 1883. He has occupied the Chair of the Institutes of Medicine in McGill University, that of Clinical Medicine in the University of Pennsylvania, and, since 1889, he has been Professor of Medicine at the Johns Hopkins University, Baltimore, and Physician to the Johns Hopkins Hospital. He was President of the Canadian Medical Association in 1885. Professor Osler has contributed extensively to medical literature, and is the author of one of the best and most widely read text-books of medicine of the present day. The University of Oxford is to be congratulated upon the choice by the Crown of a man so widely known and so universally regarded as a foremost exponent of the science and art of medicine. He is indeed one to whom they may, in the terms of their own resolution, "with all confidence give their loyal support."

THE CITY DISPENSARY FOR THE TREATMENT OF PULMONARY CONSUMPTION.

(*To the Editor of the Australasian Medical Gazette*).

Sir,—A sub-leader in your September issue adversely criticises the proposal of the Health Committee of the Sydney Municipal Council to establish a dispensary for the purpose of combating consumption, expresses a preference for sanatoria, and states that "at the large metropolitan hospitals the out-patients' departments provide all that is necessary in the way of medicines for patients suffering from this disease, and also the necessary machinery for the selection of suitable cases for sanatorium treatment."

I admit that the sanatorium treatment is the ideal one, but I assert, without fear of contradiction, that its general application is so costly as to be a practical impossibility. There is no prospect whatsoever of raising sufficient funds to establish sanatoria capable of dealing with all the suitable cases.

It is well known that Alderman W. Camac Wilkinson, M.D., is the author of the Health Committee's proposal, and we may reasonably take his address on "The Rôle of the City Dispensary in the Crusade Against Consumption" as a more complete exposition of the views of that body. A study of this address will convince any reader with a knowledge of the out-patients' departments of the large metropolitan hospitals—unless, indeed, he be already prejudiced in this matter—that:—1. The dispensary can be made far more attractive to the poor consumptive than are the out-patients' departments, and so the subjects of prolonged illness, who might early be discouraged at the lack of apparent improvement, may be induced to continue attendance to their ultimate advantage. The chief elements in this greater attraction will be—(*a*) the supplying of suitable foods, *e.g.*, milk and butter; (*b*) the greater prestige enjoyed by a special department officered by physicians who must through their work become specialists in the treatment of this malignant disease. 2. The dispensary can do more for the consumptive than can the out-patient department, for—(*a*) the patients being inflicted all with the same illness the physicians will have greater facilities for educating them to conserve their failing health; (*b*) the dispensary will supply foods as well as medicine; (*c*) frequent application of bacteriological tests will afford greater accuracy in treatment. (It is proposed to attach a laboratory to the consulting room. I know of no such provision in connection with an out-patients' department in any Sydney hospital.) 3. The dispensary can do more for the prevention of tuberculosis, not only of the lungs but of other organs—(*a*) it will lead to the discovery among the house mates of the patients of other cases suitable for sanatoria or for hospitals for the incurable, even though the majority of the patients belong themselves to neither of these classes; (*b*) it will send a trained nurse into the homes of patients to inspect, to advise, and to set an example in hygiene; (*c*) it will supply sputum flasks and disinfectants, and will instruct patients in their use, so that others may be protected; (*d*) it will educate the friends of patients in personal prophylaxis, and so protect those most liable to infection. 4. Dispensary attendance will not—as sanatorium inhabitance would—prevent patients from earning some wages.

It is estimated that a dispensary adequate for the treatment as indicated of all the consumptive poor of Sydney, and the instruction of their relations and friends, could be maintained for less than £1000 a year.

To summarise. 1. A dispensary is better than an out-patients' department on account of closer attention to patients, supply of food, discovery of early cases amongst relatives, and especially through the protection it offers to the community in general. The main object of the out-patients' department is to treat the individual patient; the main object of the dispensary is to combat the spread of the disease. 2. A dispensary is more economical and practical than a sanatorium, in that a given sum expended on a dispensary will achieve far more than it would if expended on a sanatorium, and that dispensary attendance will not prevent the earning of some wages.

An article by Dr. Phillips, of Edinburgh, quoting results of 15 years' experience, and lately published in the *B.M.J.*, strengthens these views.—I am, etc.,

F. G. Griffiths,
M.B. (Syd.)

Gundagai, N.S.W.
Oct. 13th, 1904.

Mr. T. Pratt, organising secretary for the Royal Alexandra Hospital for Children, has received from Mr. T. Bridges, president of the council of the public schools' A.A.A., a cheque for £30, being part proceeds of the sports for the re-endowment of the association's cot at the hospital.

PUBLIC HEALTH.

New South Wales.

Health of the Metropolis.—Dr. W. G. Armstrong, the City Health Officer, reports that there were 403 deaths during October of persons resident within the metropolis, exclusive of deaths of residents within the limits of the harbour and of patients in the Hospitals for the Insane. This figure is equivalent to an annual mortality rate of 9·35 per 1000 living, or corrected by the inclusion of the metropolitan proportion of deaths in Benevolent Asylums and Hospitals for the Insane throughout the State, 10·07 per 1000. Diarrhœal diseases caused 14 deaths, of which 13 were attributed to enteritis and one to diarrhœa. These figures represent a very much lower mortality than is usual in October from these causes. The principal infectious diseases, exclusive of diarrhœa, caused 10 deaths, of which one was due to measles, 1 to scarlet fever, 2 to influenza, 2 to whooping cough, and 4 to diphtheria. No deaths were caused by typhoid fever. One death was registered from cerebro-spinal fever and one from bubonic plague; the latter though registered in October occurred at the end of September. Phthisis with 44 deaths caused an average mortality. Respiratory diseases were less fatal than is usual in October. Bronchitis caused 12 deaths, and pneumonia 25. Sixty-five deaths were attributed to diseases of the heart and blood vessels, and 29 to cancer. Infantile mortality was very low for the month of October. Eighty-three deaths of infants under 1 year of age were recorded, corresponding to an infantile mortality of 70 per 1000 births. The principal causes which contributed to infantile mortality were: prematurity, 25 deaths; developmental diseases, 22 deaths; convulsions, 6; respiratory diseases, 8; enteritis, 8. Notified attacks of infectious disease during the month totalled 238, of which 163 were scarlet fever, 59 diphtheria, and 16 typhoid fever. The number of attacks of scarlet fever was somewhat excessive, and diphtheria was more prevalent than usual. There was, however, less typhoid than has been experienced in Sydney in October for many years.

The Bubonic Plague.—No infected rats have been found in Sydney for many days; the last case of plague occurred on September 10th. The rats have been kept down to such an extent in Darling Harbour that it is most difficult to catch any now. The same remark applies to the produce stores in Sussex-street. The health committee of the City Council have decided to recommend that the staff of men employed on plague prevention work should be disbanded. They have been working on the foreshores of the harbour and in the stores and produce places, and there is now little for them to do. This will, however, mean no reduction of the number of men employed at catching rats.

Vital Statistics.—The Government Statistician's report on the vital statistics of the metropolis shows that during the month of October 1195 children were born (605 males and 590 females), whilst 425 persons died (212 males and 213 females). The birth record is 83 above and the death 36 lower than the average for October during the previous five years. The rate is slightly above the mean of the previous ten years, and having regard to the considerable fall in the rate of recent years, this reflux represents a great improvement. The illegitimate births numbered 129, comprising nearly 11 per cent. of the total births.

The mortality rate is the lowest during the last decennium, and 14 per cent. below the average of that period. In respect of young children, the rate is most favourable. Amongst children under one year of age there were 17 deaths in the city and 65 in the suburbs, equivalent, respectively, to infantile rates of 70 and 68 per 1000 births, or, on the whole, to 69 deaths of infants per 1000 births in the metropolis, and comprising the lowest October record of the ten-year period. In order to accentuate this fact, it need only be stated that the infantile mortality for the month under review is 27 per cent. below the normal. Of persons aged 70 and upwards there were 73 deaths (32 males and 41 females), at the following ages:—48 ranging from 70 to 79; 23 from 80 to 89; and one each at 93 and 94.

Queensland.

Notification of Pulmonary Tuberculosis.—The following is a copy of a circular issued to the medical profession in Queensland, from which it appears that the health authorities in that State have decided to include pulmonary tuberculosis as a notifiable infectious disease under the "Health Act of 1900":—"Department of Public Health, Queensland. Brisbane, October 19th, 1904. Dear Sir,—I have the honour to inform you that the disease known as pulmonary tuberculosis has been brought under the provisions of 'The Health Act of 1900' as a notifiable infectious disease. Hitherto, as you are aware, deaths only from phthisis were required to be notified to the local authority of the district in which they occurred. The compulsory notification of pulmonary tuberculosis is instituted solely with the view to emphasising the necessity of destroying the expectoration of patients suffering from that disease and of disinfecting rooms soon after their vacation by such patients. Copies of rules for the guidance of consumptive patients and persons looking after them are forwarded herewith, and, while assuring you of the desire of my department to interfere as little as possible between the medical attendant and his patient, I trust you will have no objection to distributing these printed leaflets among such of your patients as are suffering from consumption. Further copies will be supplied to you upon application to this department. Should you, however, prefer my department to undertake the work of imparting the information contained in these rules to all or any of your patients who are suffering from pulmonary tuberculosis, the services of the departmental nurse will be made available for that purpose free of charge, provided the patient or patients are residing within the metropolitan area, or, roughly, within a radius of 12 miles from the General Post Office, Brisbane. Rooms vacated by such patients situated within the above-mentioned area will be disinfected by the officers of my department gratuitiously. Specimens in connection with cases or suspected cases of pulmonary tuberculosis forwarded by any legally qualified medical practitioner to the Government Bacteriologist, Brisbane, will be examined and reported upon free of charge. The foregoing is a brief sketch of the preventive campaign to be instituted by my department. If the patient and other members of the household can be made to realise that, in observing the rules prepared for their guidance, they not alone but in conjunction with others, both public officers and private persons, are taking part in an organised attack, they will probably be encouraged to continue the work about to be inaugurated. I feel sure I can solicit your assistance for the furtherance of this work.—I have the honour to be, Sir, your obedient servant, B. Burnett Ham, M.D., Commissioner of Public Health."

Tasmania.

Infectious Disease in Hobart.—Commenting upon the report of the medical officer of health for Hobart that at the end of last month the city was free from all infectious diseases, the *Hobart Mercury* says:—"The chorus of 'hear, hears' which greeted the statement in the health officer's report that there are no cases of infectious disease in the city at the present time should be re-echoed by every person in the community. Not that Hobart has been more subject to them of late years than any other city in the southern hemisphere, but because the city has secured a somewhat unenviable and undeserved reputation for some forms of infectious disease; and evidence such as that given by the health officer should dispel any doubts on the point which may have remained, and must be heartily welcomed by all. Especially is that the case at this time of the year. We are just entering on the summer season, and nothing does more to encourage the tourist traffic than the knowledge that the health of a place is good, and that visitors may come and go without any danger of infection. This State suffered enough last year by the misfortune which befel Launceston, for the news was quickly spread all over Australia, and travellers for the time being gave Tasmania a wide berth. Let us hope that the same assiduity will now be shown, and that the Corporation, the Tourist Association, and the Government will let it be known far and near that the sanitary conditions of Hobart are nearing perfection, and that there is not one case of infectious disease of any kind in our midst. With the facilities offered to visitors for getting about cheaply and expeditiously, our invigorating climate and beautiful scenery, backed up by the cheerful fact just stated, the coming season should see large crowds of tourists in Tasmania from all parts of the Commonwealth."

Vital Statistics.—During the month of September there were 48 deaths registered in the registration district of Hobart. In the city proper there were 33 deaths, giving a death rate of 16·08 per thousand per annum. The principal causes of death were:—Typhoid, 1; tuberculosis in various forms, 5; cancer, 3; congenital defects, 3; bronchitis, 2; diseases of the heart, 5; old age, 4; and the remainder were of a general character. Ages at death:—3 were under 1 year of age; 3 between 1 and 5 years; 17 between 5 and 65 years; and 10 over 65 years. The total number of births registered in the district was 58—34 males and 24 females. In the city proper, 42—25 males and 17 females. There was one case of enteric fever reported (which emanated from the country), one case of diphtheria, and 1 of scarlatina.

Victoria.

Adulteration of Food Bill.—The following resolution has been passed by the Chamber of Manufactures:—That this chamber is fully in accord with the objects of the bill relating to the adulteration of food, and quite recognises the duty of the State in maintaining public health and prolonging the life of the citizens; but it takes exception to the following matters:—Clause 2.—In the interpretation of the word "substances," the words "whether" and "or not" should be eliminated. As this bill has for its object the preservation of health, the word "substances" should only refer to matters or ingredients that are injurious to health only, because many substances used in the arts and manufactures (other than foodstuffs) may be prohibited from importation under clause 12.

Clause 4 (b).—This should be considerably modified, inasmuch as general food products should not be interfered with when in course of transit from one person to another within the Commonwealth, and in no case should a package be opened except in the presence of the consignor, consignee or their agents, save certain perishable goods, to be specified.

Analysts should be examined, registered and sworn under the Act.

Clause 6, line 2.—After "enter" dele "without warrant," and insert "only under the written authority of the chief officer of the board."

Clause 21 is very open, and it is thought the Act should specify prohibited substances, retaining power to add to such list whenever such is desirable for the commonweal; but before the prohibition of any specified article, in the event of Parliament not being in session, the intention of the Governor in Council should be made public at least 30 days before the regulation becomes law.

Open Air Treatment of Tuberculosis.—In a report received by Dr. Gresswell on the open air treatment of consumptives at the Amherst Hospital, it is stated that of the seventeen patients all but two have gained in weight. As usual, the report states, the result of the treatment in relieving fever is very evident. Dr. Gresswell remarks that one of the advantages looked for from a temporary sojourn at a sanatorium is the education of the patient as to the safety and advantage of the free opening of living rooms and bedrooms to the air and sunlight. The husband of a patient now accommodated at Amherst has written to Dr. Gresswell after a visit to the institution expressing satisfaction at the treatment his wife has received, and he goes on to say: "The work done is good, not only for patients, but also for others who hear about it, and since my visit one house has now more fresh air and sun in it than it had for years previously.

West Australia.

Leprosy.—A man suffering from leprosy has been discovered at Marble Bar. He is being attended to by an orderly attached to the local hospital.

THE BATTLE OF THE CLUBS.

Victoria.

According to a paragraph in the Melbourne *Age* of November 11th:—"Numbers of residents of Timmering who are members of the Rochester branches of the A.N.A., I.O.R., H.A.C.B.S., and I.O.O.F. friendly societies, are concerned in the result of the meeting of the lodge delegates called to consider a new agreement submitted by the two medical officers of the lodges named, which contains drastic provisions to curtail the medical privileges hitherto enjoyed by the members. The agreement, when submitted to the branches by the delegates for instructions, has been the subject of hostile criticism, especially a clause which makes it compulsory for any member called upon to satisfy the medical officer upon whose list he is placed that he is not in receipt of an income of £300 per annum. It is also asked that attendance after accidents should be charged for at ordinary fees, and the ages to which children should be attended should be at a standard of 16 years, instead of 18, as prevails in some lodges, for either sex. The principal clauses objected to, especially the one referring to a member's income or ability to pay ordinary medical fees, are quite opposed to the constitution of most of the lodges. The new arrangement is the suggestion of a young medical officer who has just bought a local practice, and who strenuously objects to men of independent means availing themselves of lodge medical benefits—a phase of professional etiquette not provided for in the constitution of any of the societies concerned."

We are entirely in sympathy with the medical officers, and congratulate them upon the stand they have taken against the sweating by the A.N.A. and kindred institutions.

HOSPITAL INTELLIGENCE.

Hobart Hospital.—At the monthly meeting of the board of management of the Hobart General Hospital, held last month, it was reported that during the month 193 patients had been treated in the hospital; discharged, 92; died, 11; leaving 51 males and 39 females under treatment on the 1st instant. The daily average number of occupied beds was 87, as compared with 79 last year, and 84 during September, 1902. The medical committee had considered the application received from the Chief Health Officer, Department of Public Health, asking for the co-operation of the board of management in staffing the quarantine station, Barne's Bay (if required at any time), and now recommended that the request of the Chief Health Officer be acceded to as far as practicable. The senior house surgeon recommended that a small wooden shelter for the outdoor treatment of consumptives be erected in the hospital grounds at an estimated cost of £15, the capacity of the accommodation being for one to four patients.

Launceston Hospital.—At a meeting of the board of management of the General Hospital the finance committee reported for September £118 received in fees, and £779 remaining on the books. Expenditure for the month had been £23 in excess of receipts. The surgeon superintendent, Dr. J. Ramsay, reported 112 patients in the hospital on October 1st. Admitted since, 58; discharged, 68; remaining at date, 102. Dr. W. B. Heyward, house surgeon, was granted six months' leave of absence from the middle of November next. Dr. H. L. Holmes has been appointed *locum tenens* for Dr. Heyward.

Women's Hospital, Melbourne.—The question of appointing an assistant resident medical officer in the midwifery department of the Women's Hospital was disposed of at the meeting of the committee last month. The sub-committee appointed at a previous meeting reported that it had met the honorary medical staff, and that Dr. J. V. Morris had been selected for the position. A decision was also arrived at that a clearer understanding should be established between the committee and the honorary staff regarding future appointments, and, in order that the final selection might rest with the committee, it was recommended that the names of applicants be forwarded to the staff and returned in order of merit, with statement of special qualifications possessed by the candidates. The report was adopted.

Lewisham Hospital, N.S.W.—At the annual meeting of the Lewisham Hospital, held last month, over £1350 was subscribed for the funds of the institution. This sum included a bequest of £1000 from the estate of the late Lady Macleay. From the figures submitted it was gathered that £40,000 had been spent on the hospital since its foundation, and that a debt of £4600 remained to be extinguished. His Excellency expressed his pleasure at the general arrangements of the hospital.

The Coast Hospital, Sydney.—The accommodation at the Coast Hospital is fully occupied at present with general and infectious cases. During the last few weeks the number of beds provided reached the large number of 320. At the present time the patients include 70 cases of scarlet fever, together with about 16 cases of diphtheria and 18 cases of erysipelas. During the month of October, 278 patients were admitted, of whom 187 were general cases, whilst 91 were patients suffering from infectious diseases. Of those discharged, 236 were cured, 38 relieved, and three unrelieved. During the month there were 15 deaths. At the end of the period in question there were 308 patients in the institution. The expenditure per bed for 1903 was £67 9s. 5d, but the authorities state that in order to institute a fair comparison with other hospitals, the sum of £5 10s per bed should be deducted, in consequence of the distance of the hospital from the city rendering it necessary for the Board of Health to keep up an ambulance service. Under these circumstances the cost per bed is regarded as highly satisfactory, seeing, as the board points out, that the expenditure in the Sydney Hospital in 1903 was £71 18s, and in the Royal Prince Alfred Hospital £75 3s 6d per bed.

Royal Alexandra Hospital for Children, Sydney.—At the monthly meeting of the board of the above institution the report for September showed that 54 patients had been admitted to the general hospital, 11 to the diphtheria branch, 54 had been discharged from the general hospital, 9 from the diphtheria branch, 6 had died in the general hospital, 1 in the diphtheria branch; there were 44 remaining in the general hospital and 5 in the diphtheria branch; 2493 cases had been treated in the outpatients' department, 749 being new cases. The expenditure during the month amounted to £355 18s 10d, while £36 was received in patients' payments. Two new cots had been endowed for 12 months—one by the United Grand Lodge of New South Wales, to be called "The Masonic Cot," and another by Mrs. Moody, to be called "The Sister Dora Cot." The Camden Convalescent Cottage report showed that 5 patients had been admitted, 7 discharged, and that there were 11 remaining in the cottage. Dr. J. Macdonald Gill was appointed hon. physician to fill the vacancy caused by the death of Dr. Angel Money. The board expressed the opinion that although in this instance they had appointed a gentleman already holding a position on the hon. medical staff, it should be understood that on vacancies occurring on the staff, doctors already connected with the institution would not necessarily be preferred to other members of the profession, as they considered it their duty to appoint the applicant with the highest qualification for the position.

Queen Victoria Homes for Consumptives, N.S.W.—At the last meeting of the executive committee of the Queen Victoria Homes for Consumptives Dr. Purser reported that the homes at Thirlmere and Wentworth Falls were doing satisfactory work. The new wards were approaching completion. These would accommodate 21 additional patients at Wentworth Falls. The reservoir, constructed at a cost of £350, was nearly completed. Mr. H. S. Levy reported that he had received during the year £3133 10s for the funds, £2623 10s 3d had been expended, and the bank credit balance was £17,500. The Thirlmere estate of 320 acres, comprising the home at Thirlmere, a private country seat, and a substantial brick cottage, had been placed on offer to the committee, and a committee was appointed to report thereon. Approval was given for the installation of a septic tank system at a cost of about £200.

Royal Prince Alfred Hospital, Sydney.—On October 20th the Queen Victoria Memorial Pavilions at the Royal Prince Alfred Hospital, Sydney, were formally opened by his Excellency Sir Harry Rawson and Lady Rawson, in the presence of Professor Anderson Stuart (chairman of the board of directors), Sir Normand MacLaurin (Chancellor of the University of Sydney), Sir James Graham, Messrs. J. Russell French, James Inglis, H. E. Kater, John Keep, J. P. McArthur, W. Trotter, and Dr. F. Antill Pockley (members of the board of directors), and nearly all the honorary medical staff, and a large gathering of the general public. Professor Anderson Stuart explained that "the hospital was designed to provide accommodation for 350 patients. On this basis the hospital was opened in September, 1882, with 146 beds, at which it stood for three years. In 1886 the number was increased to 161, and in the following year to 224. It remained at that point till 1894, when the hospital accommodation reached its present maximum of 236 beds. When completed and fully equipped, the additions will increase the accommodation from 236 to 456 beds, thus placing the Royal Prince Alfred Hospital in the position of the largest hospital in the southern hemisphere." The statue of the late Queen Victoria, which surmounts the pediment of the southern pavilion, was then unveiled by his Excellency. Lady Rawson then unveiled a similar statue of the late Prince Consort, which adorns the pediment of the northern pavilion. Then his Excellency unveiled marble busts of the late Dr. F. Norton Manning (presented by subscribers) and Professor Anderson Stuart (presented by the honorary medical staff). Professor Anderson Stuart said it was specially fitting that his Excellency, as the representative of the Throne, should perform the ceremony of opening the new pavilions, for they were essentially connected with the Royal family. As the hospital was built to perpetuate the recovery of Prince Alfred, the brother of his Majesty the King, so did those pavilions constitute the national memorial of this State to the memory of her late Gracious Majesty Queen Victoria. The foundation stone of the pavilions was placed just over three years ago by the Prince of Wales, then Duke of Cornwall and York, on the occasion of his memorable visit to these shores. The means to furnish and equip them had been provided by the voluntary contributions received from the public towards the Queen Victoria Memorial Fund, a total of no less than £13,000 having been raised in that way—a noble response to the appeal made, and an eloquent testimony to the warm feeling on the part of the people of the State towards their late Queen. It was intended that the Royal Prince Alfred Hospital should be not only the largest, but the most up to date in the southern hemisphere. A portion of the new accommodation was so urgently needed that the Government had sanctioned the immediate use of the basements, with two wards on the ground floors. The bed accommodation would thus be increased at once by 36 beds, while there would also be immediate possession of other most important departments, such as the dispensary (already in actual operation in the basement), X-ray, Finsen light, baths of various kinds, physical exercise, waiting-rooms for patients' friends, rooms for patients' clothes, and so on, which were all urgently needed in the economy of the institution. The other wards and the operating theatres, etc., could be opened as they became available. His Excellency said it gave him special pleasure to complete, as it were, the work begun by his Royal Highness the Prince of Wales when he visited Australia a little over three years ago. They should be proud to have in their midst such a fine institution, which not only was an ornament architecturally to the metropolis, but also was the means, partially, of sending out into the world many young doctors and nurses to minister to the sick of this and other States. It was an integral part of the University, and as such those additions should be specially valuable, affording as they would greater opportunities for the medical students to study disease in all its forms. The hospital, he understood, was becoming distinguished for the excellence of its surgical work, for which special provision for the future was now being made, and there would soon be four separate and complete operating theatres in the hospital. It would appear that the institution, when the pavilions were quite completed and equipped, would be almost perfect in its appointments, and a monument to the wisdom of those who designed it. His Excellency then turned the key of the door which opened the Victoria Pavilion, and Lady Rawson performed a similar duty in connection with the Albert Pavilion, the additions being declared open amidst cheers. Sir Harry and Lady Rawson were presented with the keys and locks, which were of gold, as souvenirs of the occasion. The Chairman announced that he had just had placed in his hands a letter containing a cheque for £2000 from the trustees of the estate of the late Sir William Macleay. The visitors were entertained at afternoon tea, and subsequently inspected the various wards of the institution, receiving every attention from the matron and her staff, as well as from the members of the board, the medical officers, and the secretary.

Infectious Diseases Hospital, Melbourne.—The bill to provide for the maintenance of the Queen's Memorial Infectious Diseases Hospital by the metropolitan municipalities specifies that the council of each municipal district shall in each year pay to the governing body of the hospital such proportion of the probable cost of maintenance as the valuation of the ratable property in each district bears to the combined valuations of all the districts. The payments are to be made in four equal quarterly instalments, in advance, in January, April, July and October. The Governor in Council is to be empowered to make regulations providing for the representation of the contributing municipalities on the governing body. A draft of this bill was considered at a meeting of the committee of the Queen's Memorial Infectious Diseases Hospital, held on November 10th. This proposed the vesting of the rates to be paid by the municipalities in the hands of the Governor in Council, and the majority of the meeting thought it would take too much of the control out of the hands of the committee. On the other hand, some of the members thought that in the bill the Premier was only doing what was asked of him, making it compulsory for certain municipalities, which shirked the obligation, to pay their quota towards the hospital. A sub-committee of three was appointed to interview the Premier, and ask him to withhold the bill until such time as the municipalities had had time to consider it. The medical report showed that since 3rd inst. eleven patients had been admitted into the institution, of which seven were diphtheria cases; eight had been discharged, and the number in the hospital was twenty-eight.

Brisbane Hospital.—The Brisbane Hospital *Monthly Chronicle* remarks that for many months the hospital has been practically without a financial policy. There have been persistent rumours of intended municipalisation and of nationalisation. The committee and the public alike have lived in continued uncertainty of what the immediate future might have in store for the institution. A recent delivery by the Premier from his place in Parliament has made it clear that for the present the Government have no intention to disturb the voluntary system under which the hospital has all along conducted its useful work of relieving suffering and saving human lives. It is to be regretted that the subsidy may suffer further reduction, still—if the public will keep it constantly in mind and contribute according to their ability—the hospital should be able to carry on. This paper will, as hitherto, show from month to month the position of the finances, the work accomplished, and what it costs, and so long as the administration continues, by economy and efficiency, to deserve public confidence, we believe it will receive public support. The incessant drafts upon the resources of the hospital call for constant replenishment. Its potentialities for effective service depend upon the measure of supply.

UNIVERSITY INTELLIGENCE.

Melbourne University.—At a meeting of the Melbourne University Council last month the chairman Dr. McFarland, announced that he had received the following letter from Professor Baldwin Spencer:—"The University Fund Committee has received information of a munificent donation of £3000 by Mr. David Syme. The money is to be devoted to the foundation of a research prize, which will be of the value of £100 per annum, and will be awarded annually to the author of the most important piece of original work in one or other of the following branches of science:—Biology, chemistry, geology and natural philosophy. Interpreted in the broadest manner, Mr. Syme is desirous that the prize should be open as widely as possible to all workers in the Commonwealth; but as the selectors will of necessity be professors in the Universities, or heads of scientific Government departments, such will not be eligible to compete. With this limitation the prize is to be open to anyone who has been a resident in the Commonwealth during not less than five of the seven years immediately preceding the award. Other things being equal, preference will be given to research work having reference to the material and industrial development of Australia." The chairman remarked that the gift was a splendid one. In addition to the large benefaction itself, the idea was a magnificent one, and would certainly bring honour to the University. A proposal to establish a joint board of the various universities of Australia, similar to that of Scotland, was brought forward by Dr. Leeper. He referred to the excellent results which followed the congresses of the English and Welsh students; and the progress of the inter-University work in Germany. A motion favouring the establishment of a joint board to deal with questions of common interest to all Australian Universities and to arrange for occasional inter-University congresses of both graduates and students was agreed to, and it was decided to appoint a committee of inquiry.

In the Victorian Legislative Assembly last month the University Bill, providing for an increase in the grant from £9000 to £20,000 per annum for three years, passed through all stages.

MEDICAL NOTES.

A Novel Hospital Collecting Machine.—An ingenious piece of mechanism has been devised by the secretary of the London Hospital. A clock-face bearing an attention-compelling statement that the hospital costs one penny per second to maintain, and inviting the visitor to take the entire cost of the hospital on to his shoulders for one second, contains a small automatic machine by which the clock-hand is advanced a second when the penny is dropped in. The secretary hopes shortly to add a gramophone to his new toy which shall say "Thank you" for every gift—preferably in the King's voice.

Australian Health Society.—His Excellency the State Governor of Victoria presided at the annual meeting of the Australian Health Society, held in Melbourne last month, and made a few remarks on the subject of hygiene. He said that perfect health depended upon pure air, pure water, and sanitary habitations. Given those conditions, one was on vantage ground for meeting any form of attack from disease. Two years ago, in Egypt, he saw for himself how an epidemic of cholera was met and warded off by the British troops. It was a severe epidemic, and some 50,000 of the civil population died. As soon as the outbreak occurred all the troops were confined to camp, and everyone was supplied with boiled and filtered water, and not allowed to use any other. All vegetables and meat were inspected by a doctor, and washed and cooked in filtered water, and the result was that only four men contracted the disease and died, and these four, owing to the nature of their duties, were not under the same restrictions as the rest of the garrison. While those strict regulations were in force, enteric fever, which is usually prevalent, practically disappeared.

A gift of £1000 to endow a scholarship for poetry at the Melbourne University.—Mr. H. B. Higgins, K.C., M.P., has waited upon the Treasurer, Mr. Bent, and informed him that he intended to offer the University £1000 worth of 3 per cent. stock for the specific purpose of providing an annual scholarship in poetry. According to Mr. Bent's previous announcement the Government is pledged to give £ for £ for all sums offered in the way of scholarships to the University. Mr. Higgins' generous offer was at once accepted.

HUDSON'S "EUMENTHOL" JUJUBES (Registered) are a Gum Jujube containing the active constituents of well-known Antiseptics, Eucalyptol, Thymus Vulg., Pinus Sylvestris, Mentha Arv., with Benzo-Borate of Sodium, etc., and exhibit the antiseptic properties in a fragrant and efficient form. Sold by all chemists; tins, 1s 6d. Are Antiseptic, Prophylactic, reduce Sensibility of Mucous Membrane. Mr. W. A. Dixon, F.I.C., F.C.S., Public Analyst of Sydney, after making exhaustive tests, says:—"There is no doubt but that 'Eumenthol' Jujubes have a wonderful effect in the destruction of bacteria and preventing their growth. . . . I have made a comparative test of 'Eumenthol' Essence and Creosote, and find that there is little difference in their bactericidal action."—[ADVT.]

Clinical Afternoon at the Royal Alexandra Hospital for Children, Sydney.—The fifth clinical afternoon was held at Valentine-lane, Sydney, on Friday, October 21st. Dr. Binney presided. Dr. Moxham, hon. dental surgeon, read a short paper on "The Care of Children's Teeth." Dr. Binney exhibited a child, aged 3 years, suffering from a fungating tumour of the neck, with secondary deposits under the skin of the chest. Dr. Gill sent up a boy, aged 8 years, suffering from hemiplegia of recent origin. There was a definite specific history, and the boy had headache and optic neuritis. Dr. Lipscomb showed a baby, aged 7 months, exhibiting well marked genu-recurvatum. Dr. Litchfield showed a child, aged 12 months, with talipes calcaneus, due to paralysis of the calf muscles, also a congenital imbecile, aged 6 years, exhibiting nystagmus and paralysis of the right external rectus.

A despatch has been received from the Secretary of State for the Colonies to the effect that their Majesties the King and Queen accord their patronage to the new Hospital for Women, Paddington, Sydney, and that the King has approved of the hospital being granted the title "Royal."

New South Wales Fresh Air League.—At the annual meeting of the Fresh Air League the thirteenth annual report, read by Dr. A. A. Cohen, showed that the efforts of the league had been attended with satisfactory results. During the season 209 persons has been sent to the farm homes; in all, since the commencement of the work in 1881, 2714. The committee expend each season about £500, but further means are needed to make it possible to continue operations in the winter months as well as in the November to April season. Another institution was sadly required—namely, a sanatorium for infants, where children could be attended to without the mother being compelled to leave her home and other children. The balance-sheet showed a balance in hand of £445 15s 6d, £177 13s 6d being from subscriptions and donations, £253 6s 4d net proceeds of ball, and £101 17s 11d proceeds of the floral fête. It was stated by the hon. secretary, Mrs. C. Kellick, that during the ensuing season the league would be assisted by the Ministering Children's Leagues of Moss Vale and Bowral.

PRACTICES FOR SALE.

N.S.W.: Prac. in large town, Southern line. Cash income, £600. Appts. £200. Price, £300. Est. 8 yrs.
N.S.W.: Prac. in which £500 yearly can be saved. Price for prac., furn., 12 rooms, 3 horses, everything, £400.
N.S.W.—Splendid Country Prac., having Hospital and other appts. to a large amount, is for sale. Prac. must be purchased outright, and though purchaser takes over as owner, he practices ostensibly as *L.T.* till such time he may think opportune to be elected. Price, £500 cash.
S.A.: Prac. in Adelaide, which for 26 years has averaged £2000 cash annually. This is a general practice, also not a personal one. Good introduction. Price, £1000.
N.Z.—Prac. near Auckland, worth £1500. Price, £600 cash; no reduction. Prac. is *bona fide*, and can be recommended.
N.Z.—Surgical Prac. for Sale, which returns annually £3000 cash. Photos and all particulars of expenses, etc., supplied.

MR F. W. LOXTON,
16 O'Connell-street, Sydney.—[ADVT.]

Sanitary Telephones.—A company, entitled the Sanitary Telephone Attachments Limited, is being formed for the purpose of acquiring the patent rights and of introducing the "sanitary rotating diaphragm for telephones"—an apparatus which enables every person using a telephone to have a fresh diaphragm for himself without running the risk of inhaling the accumulated impurities. It is a simple and ingenious device, and has already had the approval of the Victorian Board of Health. Patent rights have been secured for the invention throughout the world.

School Sanitation in South Australia.—At the meeting of the Central Board of Health the Chief Inspector of Health reported on the sanitary condition of the Adelaide and suburban State schools. He had visited 42 of these institutions, and found the lavatories, playgrounds, and sanitary accommodation generally in a satisfactory sanitary condition. In reference to the system of flushing, the apparatus in use seemed to answer well where there was careful supervision and the flushing was regularly attended to, but there was a tendency for the openings of the flush discs to become choked. The sanitary accommodation in some cases appeared to be insufficient, as was indicated by the state of the boys' department after recess time. At some of the larger schools he had noticed a deficiency in the sanitary accommodation for the girls. A copy of the report was ordered to be forwarded to the Inspector-General of Schools.

Queen's Home, Adelaide.—Owing to the increased demand for accommodation at the home, the committee have decided to complete the north wing of the building. Plans and specifications have been prepared, and tenders for the work will be called at once. The building and furnishing of the additions will cost £1500, and towards this sum the handsome donation of £1000 has already been received. The committee will be glad to receive further donations from those who are in sympathy with the objects of the institution.

We have been requested to state that the trustees of the Public Library of New South Wales are anxious to secure, for preservation in the Public Library of the State, early records of the History of New South Wales—which is, for the first fifty years, practically the history of Australia. Copies of some of the historical documents in the archives of the Public Record Office in London have already been made, and printed in the Historical Records, and these cover the history of the earliest period of colonisation. The trustees are now desirous of obtaining local records of our early history, with special reference to the first settlements of the various country districts. They will be very grateful if old residents and others who have in their possession documents relating to the early settlement of their districts will present them to the Public Library of New South Wales, Sydney, where they will be preserved and made available for students. If in any case persons possessing valuable records of this nature are unwilling to part with them, the trustees will esteem it a great favour if they will submit the documents for inspection, so that copies may be made and a record kept of their whereabouts.

Tenders are now called by Messrs. Kent and Budden, architects, for the erection of the Royal Alexandra Hospital for Sick Children at Camperdown, Sydney. It is proposed to complete the greater part of the scheme. The time for the closing of tenders has been extended until the 25th inst.

Care of Consumptives in South Australia.—Mr. C. H. Goode (chairman of the James Brown Trust) has accepted a tender for a new wing at the Kalyra Home for Consumptives for the reception of cases which may have become chronic after their reception in the institution. The tender amounts to £960, towards which there is in hand £826 6s 2d. About a thousand pounds will be required, and this he hopes to receive by the time the building is completed.

The Old North Sydney Hospital.—Recently a deputation urged the Government to resume the old hospital buildings in North Sydney, for the purpose of establishing a technical college on the site for the northern suburbs. The Minister for Public Instruction stated that he would be willing to sanction the resumption if the trustees of the hospital were willing to accept half the value of the site and buildings. He at the time reminded the president of the hospital committee, who was present, of the generous treatment received at the hands of the See Government in the erection of the new and costly hospital buildings. The matter has been before the hospital committee and discussed, with the result that the trustees were authorised to offer the site to the Government for £2000, and it is understood that the offer of the trustees will at once be conveyed to the Minister by the representatives of the electorates interested.

PERSONAL ITEMS.

During the temporary absence of Dr. Mayne, on leave, Dr. McLean is taking the oversight of the Brisbane Hospital as acting superintendent. We are glad to report that Dr. Mayne, who has been suffering from a poisoned finger, is now progressing favourably.

Dr. F. M. Blackwood, late of Summer Hill, returned to Sydney by the N.D.L. s.s. "Scharnhorst" last month after a trip to Great Britain and on the Continent. Dr. Blackwood, who had for some time previously been in poor health, undertook the trip solely for purposes of rest and recreation, but before leaving on the return trip he had so far recovered as to take up a course of work at various London hospitals.

Dr. J. B. Cleland, late resident pathologist at the Royal Prince Alfred Hospital, Sydney, has succeeded in obtaining one of the Cancer Research Scholarships at the London Hospital.

Dr. Hugh Armstrong, who has removed from Tamworth to Newcastle, received a presentation from the Golf Club at Tamworth previous to his departure.

Dr. Blackall, of Queanbeyan, N.S.W., who contested the electorate at the last State election, was presented with a purse of 84 sovereigns by his supporters.

Dr. E. S. Stokes, who has been appointed medical officer and bacteriologist to the Metropolitan Board of Water Supply and Sewerage, Sydney, graduated in medicine at the University of Sydney. In 1891 he held the positions of resident medical officer at both Sydney and Prince Alfred Hospitals. In 1899 he visited Europe in order to acquire an advanced knowledge of subjects specially relating to public health, studying at University College, London, where he obtained the diploma of public health, passing the examination with honours.

Dr. R. B. Wade has removed from "Sparnon," Stanmore, to the corner of Fotheringham-street and Stanmore-road, Sydney, to the house lately occupied by Dr. Kingsbury, with whom he has entered into partnership.

Owing to continued ill-health Dr. James Kingsbury has decided to give up practice for a year, during which time he will go for a trip to the United States.

News has been received by cable that Mr. Herbert J. Stewart, who has been studying medicine for some years at Edinburgh, has passed his examination of M.B., and is returning to Brisbane.

Dr. Zlotkowski, of Mungindi, N.S.W., has disposed of his practice to Dr. T. Wilson, of Launceston, Tasmania. Dr. Zlotkowski left Mungindi on 13th November, and will leave for England on December 16th next.

At a recent meeting of the Aberdeen Lodge, U.A.O.D., No. 262, the members and citizens presented Dr. John McInerney, of North Carlton, Victoria, with a handsome oak secretaire as a token of esteem.

Dr. Bronte Smeaton has resigned his appointment as a member of the Dental Board of South Australia.

Dr. John Anderson has resigned his appointment as officer of health to the Council of the Shire of Winchelsea, Victoria.

Dr. G. E. Rennie has removed his consulting rooms from College street to 159 Macquarie-street, Sydney.

Dr. Speirs Kirkland has resumed practice at his rooms, 231 Macquarie-street, Sydney.

The friends of Dr. Lyden, late of College-street, Sydney, will be pleased to hear that he is at present doing post-graduate work at two of the London hospitals.

Dr. E. A. Woodward has removed from Burwood to Arncliffe, Sydney.

Dr. Burnett Ham published a small book entitled " A Handbook of Sanitary Law " prior to his engagement as Health Commissioner by the Queensland Government. This book was adopted as a text-book in England, and recently went into a third edition. Dr. Ham has now received letters from well-known health experts in England asking for permission to make a few additions to the handbook in order to bring it up to date.

Dr. McCall, M.H.A., of West Devon, Tasmania, left by the s.s. " Waipara " on October 17th on a trip to the old country. He will be absent seven or eight months.

Dr. John Williams has resigned his position at the Melbourne Hospital as honorary physician of the in-patients' department. The senior physician of the out-patients' department will take Dr. Williams' place for the remainder of the term for which he was elected.

The retirement of Mr. G. A. Syme, M.S., F.R.C.S. (Eng.), from the position of demonstrator in anatomy to the University of Melbourne was announced at the meeting of the University Council on October 24th. Professor Allen, who made the intimation by letter, stated that Mr. Syme's services had been of the greatest value to the University, and had extended over a period of seventeen years. On the motion of Dr. J. W. Barrett, the council resolved to make " handsome acknowledgment " of Mr. Syme's work.

Dr. W. R. Olver has commenced practice at Victoria Avenue, Chatswood, Sydney.

Dr. King, who has resided in Nowra, N.S.W., for 18 years, has disposed of his practice, and intends leaving shortly for England.

Dr. Joseph Park has removed from Helensburgh to Corrimal, South Coast line, N.S.W.

Dr. J. S. Purdy, who until recently was on the staff of the St. Pancras Infirmary, London, has obtained the degree of M.D. (Aberd.). Dr. Purdy, who has been appointed one of the lecturers on hygiene to the London County Council evening classes, has no immediate intention of returning to New Zealand.

A number of New Zealanders figured in the annual graduation ceremony at Edinburgh University. Dr. Roland T. G. Aickin and Dr. D. N. W. Murray, both of Auckland, were " capped " M.D. The former won his degree with a thesis on " Pseudomyxoma Peritonei," and the latter with a thesis on " Analysis and Treatment of 150 Cases of Chorea Minor." A third New Zealander to receive the M.D. degree was Dr. St. Leger Hugh Gribben, who sent up a thesis on " The Occurrence of Cancer among Lunatics " ; and Dr. P. N. M. Macdonald gained the M.D. degree with a thesis on " The Clinical Aspect of General Paralysis of the Insane, from the Study of 50 Cases." The following New Zealanders were awarded the degrees of Bachelor of Medicine and Bachelor of Surgery :—Russell Gerald William Adams, Alexander Wilson Hogg, Eimee Eveline Mills, M.A., B.Sc., Charles Reece, and George Herbert Ussher.

Dr. J. Martin has commenced practice at Middlemarch, Strath Taieri district, N.Z.

Dr. T. W. Corbin, who had been absent from Adelaide about seven months, has returned from London.

Dr. A. H. Bennett, formerly of Crystal Brook, South Australia, has returned from Europe. During his 18 months' absence Dr. Bennett spent a good deal of time in hospital work in London and Vienna. Dr. Bennett intends to settle in Adelaide.

Dr. E. J. Stuckey, of Adelaide, has been accepted for work in connection with the London Missionary Society.

Dr. A. E. Wigg, of Adelaide, has returned to Adelaide. Dr. Wigg proceeded to London last February, and was one of the delegates from the South Australian Branch to the British Medical Association annual meetings, held at Oxford.

Dr. Ethel Ambrose, late resident medical officer at the Perth Hospital, W.A., has returned to Adelaide.

Dr. Humphrey Makin, of Adelaide, has accepted an appointment as resident physician at the North-East London Children's Hospital, and not Dr. Marten, as stated in a lay newspaper.

Dr. A. H. Bennett, formerly of Kapunda and Crystal Brook, South Australia, has begun practice at 16 North-terrace, Adelaide.

Dr. R. S. Rogers has been elected chairman of the Field Naturalists' section of the Royal Society, South Australia.

Dr. J. C. Verco was on Tuesday evening re-elected President of the Royal Society of South Australia.

MEDICAL APPOINTMENTS.

NEW SOUTH WALES.

Bell, H. C. R., M.B., M.Ch. (Syd.), to be Government Medical Officer and Vaccinator at Wilcannia, *vice* Dr. Robert Dey, resigned.

Fisher, Walter, L R.C.P. (Edin.), L.R.C.S. (Edin.), L.F.P.S. (Glas.), to be Government Medical Officer and Vaccinator at Weston.

Gill, J. Macdonald, M.D. (Lond.), to be Hon. Physician, Royal Alexandra Hospital for Sick Children, Sydney, *vice* Dr. Angel Money, deceased.

Jones, P. Sydney, jun., M.B., Ch.B. (Syd.), to be Hon. Surgeon to the N.S.W. Deaf, Dumb and Blind Institute, Sydney.

Perkins, Richard, M.B. (Syd.), to be Medical Superintendent at Newcastle Hospital, *vice* Robt. E. Woolnough, M.B., resigned.

Pinchin, J. L., L.R.C.P. (Edin.), L.R.C.S.) Edin.), and L.F.P.S. (Glas.), to be Government Medical Officer and Vaccinator at Brewarrina, *vice* Dr. R. W. McCredie, resigned.

Sharp, W. A. Ramsay, to be Acting Port Health Officer at Watson's Bay, Sydney, owing to the illness of Dr. G. M. Reid.

Stokes, F. S., M.B., M.S., D.P.H., to be Medical Officer and Bacteriologist to the Sydney Metropolitan Board of Water Supply and Sewerage, *vice* Dr. Mailer Kendall, resigned.

Woolnough, Robt. Edmund, M.B. (Syd.), to be Resident Medical Officer at the Coast Hospital, Little Bay, Sydney.

VICTORIA.

Gamble, Morris Frederick Horsley, L.R.C.S.E., to be Deputy Medical Superintendent of the Metropolitan Lunatic Asylum, Kew, during the absence on leave of William Lowell Mullen, M.D.

Macansh, William, M B., to be a member of the Medical Board of Victoria, *vice* Thomas Hewlett, M.R.C.S., deceased.

Yuille, William Douglas, L.R.C.P., to be a Public Vaccinator for the South-Western District, *vice* John Anderson, M.D., resigned.

Officers of Health.

Barrett, William Amherst Henry, L.R.C.P., borough of Newtown and Chilwell, *vice* Bertram Brooke Hoggan, L.R.C.P., resigned.

Barrett, William Amherst Henry, L.R.C.P., shire of Meredith, *vice* Bertram Brooke Hoggan, L.R.C.P., resigned.

Philpott, Albert John, M.B., to be Medical Superintendent of the Yarra Bend Lunatic Asylum during the absence on leave of Wm. Longworth Watkins, L.R.C.S.I.

Yuille, Wm. Douglas, L.R.C.P., Council of the Shire of Winchelsea.

SOUTH AUSTRALIA.

Randell, A. E., M.B., B.S., to be Medical Officer of Health for twelve months at Maylands.

The following gentlemen have been appointed to act as Medical Officers to attend to the destitute poor and aborigines within the undermentioned districts, viz.:—

Cooper, Claude Tidswell, M.B., to be a Public Vaccinator.

Gribble, J. E., L. *et* L.M.R.C.P., P.C.S., Port Wakefield and district.

Powell, H. A., M.B., Ch.B., Kadina Corporation and Wallaroo Mines.

Souter, J. F., M.B., Ch.M., East Torrens.

Smeaton, Bronte, M.B., Ch.B., M.R.C.S., L.R.C.P., Mount Barker.

NEW ZEALAND.

Martin, James, L.R.C.P., L.R.C.S. (Edin.), to be a Public Vaccinator for the District of Middlemarch.

Orchard, Albert John, to be Surgeon-Captain, New Zealand Volunteer Medical Staff.

Paterson, Alexander, M.D., Ch.M. (Edin.), Public Vaccinator for the District of Christchurch.

Porritt, Ernest Edward, M.B., M.S., F.R.C.S. (Edin.),

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

The following persons have been duly registered as legally qualified medical practitioners in their respective States:—

NEW SOUTH WALES.

Fankhauser, Herbert William, M.B., B.S. (Melb.), 1904.
Jones, Herbert Stanley, M.B. (Lond.), 1904.

TASMANIA.

Chisholm, E. C., M.B. (Syd.), 1904; Ch.M. (Syd.), 1904.
Fitzgerald, Aileen Josephine, L.R.C.P. *et* R.C.S. (Edin.), 1904.
McCausland, Samuel Ross, L.R.C.P. *et* R.C.S. (Irel.), 1901.
Rugg, Harold, M.R.C.S. (Eng.), 1874, L.R.C.P. (Edin.), 1875.

QUEENSLAND.

Garofalo, Carmelo, M.D., Ch.D., 1898 (Naples, Italy).
Perkins, Richard, M.B., M.Ch., 1904 (Syd.)
Peters, Owen Herbert, M.B., 1902, B.S., 1903 (Melb.).
Woolrabe, Frederick William, L., 1898, M., 1898, R.C.P. (Edin.) L., 1898, F., 1895, R.C.S. (Edin.), L.F.P.S. (Glas.), 1898, D.P.H.R.C.P.S. (Irel.), 1900.

SOUTH AUSTRALIA.

Acton, Frederick Charles, M.B. (Melb.), 1893.
Downey, Michael Henry, L.R.C.P. & S. (Edin.), 1901; M.B., B.S. (Melb.), 1904.

BIRTHS, MARRIAGES AND DEATHS.

BIRTHS.

COLE.—On November 28th, at "Benwerrin," Carlton, Victoria, the wife of Frank Hobill Cole, M.D.—a son.

CONNELLY.—On October 12th, at Boulder, West Australia, the wife of Dr. W. A. Connelly—a daughter.

HARBISON.—On September 23rd, at Numurkah, Victoria, the wife of J. B. Harbison, surgeon—a son.

LITTLEJOHN.—October 16th, at Croydon, N.S.W., the wife of E. Sydney Littlejohn—a daughter.

MAHER.—October 29th, at Leitrim, Strathfield, Sydney, the wife of Dr. Odillo Maher—a son.

THOMSON.—On September 11th, at Arrowtown, N.Z., the wife of Dr. J. B. Thomson—a son.

TRAILL.—November 5th, at Coolabah, Burwood, Sydney, the wife of Mark W. Traill—a son.

WOODWARD.—On August 21st, at Market-street, Dunedin, N.Z., the wife of E. C. Woodward—a daughter.

WORRALL.—On November 2, at her residence, 20 College-street, Hyde Park, Sydney, the wife of Ralph Worrall, M.D.—a daughter.

MARRIAGES.

BROADBENT-HAYLEY.—October 12, at St. Paul's Church, Burwood, Sydney, by the Rev. Harry Bryant, Percy Lewis Broadbent, M.B., Ch.M., eldest son of E. Broadbent, Snowtown, S.A., to Ida Florence, second daughter of the late E. W. S. Hayley and Mrs. Hayley, Umaralla, Burwood.

COOK—THORNBER.—October 5th, at St. John's Church, Young, N.S.W., by the Rev. Joseph Pike, Harry Franklyn Cook, M.R.C.S., L.R.C.P. (Lond.), Mudgee, N.S.W., eldest son of the late Surgeon-General Henry Cook, M.D., I.M.S., to Mary, eldest daughter of Robert Thornber, Union Bank, Young.

GILL—EWAN.—October 22, 1904, at St. Stephen's Church, Phillip-street, Sydney, by the Rev. John Ferguson, James Macdonald Gill, M.D., of College-street, Sydney, to Elsie Frazer, fourth daughter of the late Mr. James Ewan and of Mrs. Ewan, Glenleigh, Penrith, N.S.W.

DEATHS.

MENZIES.—On September 11th, at his residence, Ajax-street, Milton, N.Z., John Forbes Menzies, M.B., B.Ch., L.R.C.S. (Eng.); aged 36 years.

WELD.—On October 28th, at Mount Barker, S.A., Ann, widow of the late Octavius Weld, M.D., aged 73 years.

BOOKS RECEIVED.

Enlargement of the Prostate; its Treatment and Radical Cure. By C. Mansell Moullin, M.D. (Oxon.), F.R.C.S. Third edition. 8vo. Price 6s. H. K. Lewis, Gower-street, London, W.C. 1904.

The Nervous Affections of the Heart. By Geo. Alexander Gibson, M.D., D.Sc., F.R.C.P. (Edin.), F.R.S.E. Edinburgh and London: Young J. Pentland. 1904.

Essays on Hysterectomy. By J. Bland-Sutton, F.R.C.S., Surgeon to the Chelsea Hospital for Women; Surgeon to Outpatients at Middlesex Hospital. London: Adlard & Son, Bartholomew Close. 1904.

LETTERS AND OTHER COMMUNICATIONS RECEIVED FROM CORRESPONDENTS:—

Dr. B. B. Ham, Brisbane; Dr. Fox, Melbourne; Dr. Bryant, Melbourne; Mr. G. T. Taylor, Hobart; Dr. F. S. Hone, Semaphore, S.A.; Dr. M. J. Lyden, London; Messrs. Baillière, Tindall & Cox, London; Sell's Advertising Agency, Ltd., London; Dr. P. Prior, Rydalmere, Sydney; Dr. Chas. MacLaurin, Sydney; Messrs. Burroughs, Wellcome & Co., Sydney; Messrs. Heyne and Co., Melbourne; Dr. F. Moreton, Warrnambool, Victoria; Dr. Louis Henry, St. Kilda, Victoria; Dr. J. M. Mason, New Zealand; Sir James Sawyer, M.D., Birmingham; Dr. D. M. Paton, Kew, Victoria; Dr. McGowan, Ballarat, Victoria; Dr. H. C. Hinder, Sydney.

AUSTRALASIAN MEDICAL GAZETTE.

MEDICAL MATTERS IN QUEENSLAND.

Presidential Address delivered before the Queensland Branch of the British Medical Association.

By William S. Byrne, M.D. (Dub.), M.R.C.P. (Lond.), Brisbane.

At the close of the year, and before giving up the chair of this Branch of the B.M.A to my estimable successor, it is the custom that the president should address a few words to the members. First of all, allow me to thank you for the kindness and courtesy extended towards me throughout my term of office; to thank the members of the Council for their attendances and advice at our meetings, and especially, on the part of the Branch itself, to thank the honorary secretary for his five years of unremitting work and unabated interest in the welfare of the Society, and who to-night resigns his position. The secretarial office is no sinecure; not alone is it most exacting in the matters of correspondence and minutes, arranging business for our meetings, and numbers of other details, but on the secretary devolves several other duties requiring the greatest tact and firmness, and I am sure I am expressing the feelings of the members of this Branch when I say that in Dr. Brockway we have had a man whose enthusiasm and fearlessness in the performance of duty will be remembered for a long time. Much as we regret his decision to retire from the post he has long filled so ably, we regret still more that he does not see his way to accept the position of vice-president, to which office I am sure he would have been unanimously elected, and so have helped to solve, with his ripe experience, any matters of difficulty which might occur in the future. However, before long I trust we shall have the pleasure of finding him taking an active part in the work which has occupied so much of his time in the past. The new secretary, Dr. Wield, is well known to us all, and in him we have a worthy successor to Dr. Brockway, and we feel sure we are fortunate in having so courteous a gentleman at the helm to guide our ship through all the breakers and rough seas that will inevitably occur as time goes on.

We have every reason to congratulate ourselves on the success of the Branch during the past year. Our meetings have been well attended, valuable papers have been read, discussions have taken place which however divergent in opinions expressed, still have all converged to the one focus of the best method of treating disease. There have been two deputations to the Government on matters of public health—firstly, to urge the notification of tuberculosis as an infectious disease, and secondly, to object to the proposal to limit the delivery of milk on one day of the week. In both these matters the opinion of the Association was laid before the responsible heads, and in each case our views have been productive of great good to the community.

There are some subjects of importance that ought to occupy our attention early in the coming year. The epidemic of infantile paralysis — acute poliomyelitis anterior — which has occurred in New South Wales and has steadily progressed through Warwick, Toowoomba, Brisbane, and even to Townsville, gives food for reflection. A few cases of cerebro-spinal meningitis have also occurred, and although the latter disease has not assumed the proportions of an epidemic, yet we never know on what day it may become so. Although the pathological conditions of the two diseases are quite dissimilar, yet the clinical features are much alike, and the paralysis which occurs in each disease impels the thought as to the possible connection between them. It is difficult to understand at present how anterior poliomyelitis, a disease of a special portion of the spinal cord, can be infectious; but the close relation of the lesion to the distribution of the blood vessels lends support to the theory that the condition of the cord is due to infectious embolism or thrombosis. Of the epidemic nature of cerebro-spinal meningitis there cannot be two opinions. I have seen one epidemic, in Dublin in 1876, and the picture of a ward full of children, each one lying on the side, with the back of the head almost touching the spine, does not easily fade from one's memory. The views of the medical staff of the Children's Hospital on those diseases would be gladly received by the members of the Branch.

Owing to the large death rate of children under one year old in Queensland, I do not think we ought to relax our efforts to induce the Government to initiate and take under control the important subject of infant feeding. This is not a matter for privat enterprise; it is purely a matter for the State. It should not be a commercial enterprise, for infant life is a most valuable State asset, and the Government ought to be prepared to run the institution at a monetary loss, the reward being the number of lives saved in the State. If only the lives of children could be prolonged over the first year, the rest would be easy, as the mortality rate for that period is 11·5 per cent., whilst between one year and twenty years of age the rate is only ·5 per cent. According to the vital statistics return for 1903, out of 13,228 children under one year old no less than 1513 died. Of these, 433 deaths were due to a single disease, namely, gastro-enteritis; but the Government Statistician is careful to point out that in 1902 and previous years, under the designation "enteritis" were classed inflammation of all parts of the intestines; but these are now divided into "enteritis," "gastro-enteritis," and appendicitis." These together numbered 489 in 1902, and 623 last year. Six hundred and twenty-three deaths, practically all amongst children, from preventable disease—a disease owing to bad milk, and by the term "bad," I do not wish to convey the meaning, unfit for human consumption, but unfit, in every sense of the term, for infant feeding. Fortunate, indeed, is the child who has not to depend upon artificial feeding during the first six months of life, but even amongst these I would like to know how many have had the poison conveyed to them by extra feedings of cows' milk. The percentage of deaths in all children under the age of one year being 11·5, what is the mortality rate in exclusively bottle-fed infants? I mentioned in a paper read before you during the year that it was about 65 per cent., and you, gentlemen, generally agreed with that statement. The appalling fact stares us in the face that 623 children died last year from a disease caused by improper food. To find a remedy for this lamentable state of affairs, it is first necessary to mention the causes. May I trespass on your patience whilst I enumerate them, so well known to you all:—Bacteriologically impure milk, contaminated water, bottles and teats, and improperly adapted milk; that is, a feeding all wrong as regards the proportions of proteids, fats and sugars. When we consider that the food which is the natural food of the infant, namely, breast milk, enters the alimentary canal in a perfectly sterile state, and the constitution of its different components is proportionately quite distinct from that of any other animal milk, and we see the carelessness and ignorance of those who feed infants artificially and the contamination of all kinds that usually occurs, one may well be horrified and pause to wonder why the mortality rate is not greater. In my opinion it is quite useless to endeavour to educate the public up to thorough asepsis in infant feeding; one might just as well hope to educate an operation nurse in work which takes years of training. I mentioned at the last deputation to the Minister that there was no milk in Queensland fit for infant consumption, and I reiterate that opinion now. There *is* no milk to be obtained at a small cost, so as to be within reach of the poorest, that is absolutely sterile, and that can be given with the proper proportions of cream, sugar and water. The remedy is a matter in the power of the Government. Let a properly-constituted laboratory be established in Brisbane, to commence with; let the milk received be tested for its fat percentage; let it be made absolutely sterile, adapted for the ages of two, five, and eight months, sold at cost price and dispensed in airtight, sterile bottles, each of which contains a single meal of properly adapted milk, suitable to the age of the child. When the laboratory has been in existence for some time, it would be a simple matter to train individuals for the purpose of managing similar institutions in less populous centres. Until some such scheme as this is adopted, infant mortality from digestive disease (I nearly wrote infective, and I do not think the term would be altogether wrong), will remain much as it is at present, and the great loss of life continue. If this suggestion were carried out properly, the percentage of infant mortality would at once approach to at least one half of the present rate, which would mean that in ten years about 4000 lives would be saved to the State. The expense of forming a laboratory of the kind I mention would be small; and although one could not expect great success at first, still, after a couple of years, when natural prejudice against a new departure was overcome, the institution would easily become self supporting.

Regarding the ethical part of the work of the Association, quite the minor part, I am glad to say, we have had correspondence during the year with the Australian Natives' Association, and I am sure you appreciate the Council's work respecting it. We still refu e to acknowledge it as a friendly society proper, as we have the best of grounds for believing it to be primarily a political association. Regarding the Brisbane Friendly Societies' Institute, the Council have been instrumental in advising several good medical men to abstain from accepting a position which socially and professionally is derogatory.

And now, gentlemen, our year's work closes to-night. The great honour you did me when you placed me in the presidential chair of this Branch will ever be remembered by me, and, I may say, that owing to your continued kindness, the duty of presiding at our meetings at the Council has been to me an extreme pleasure. Our Association is not a trades union, but is one of which we may justly be proud, existing as it does for the noblest of all purposes—the cure and alleviation of disease in all forms; and though the profession of medicine may be sometimes scoffed at by individuals, let us remember that

> "When one's all right he's prone to spite
> The doctor's peaceful mission;
> But when he's sick it's loud and quick
> He bawls for a physician."

Let us aspire to the highest ideals in medicine and surgery; the higher our ideals soar the better will be our work. Whatever we have to do, let it be done thoroughly and with all our might; and happy will be the one who can say with Tennyson—

> "I have fought for Queen and Faith,
> Like a valiant man and true;
> I have only done my duty,
> As a man is bound to do."

SOME PROBLEMS IN ASEPSIS.

By A. S. Vallack, M.B., Ch.M. (Syd.), L.M.R. (Dub.), Bowral, N.S.W.

EVERY science rests upon certain foundation principles, and the science of asepsis is no exception to the rule. Upon the following foundations the whole of its fabric has been constructed:—

1. In surgical practice, microbes are the sole cause of suppuration. No wound can secrete any pus whatever unless microbes be present in it.

2. If microbes be introduced into a wound, the result, as regards suppuration, depends upon three factors alone, viz.:—(*a*) the number of organisms introduced; (*b*) the virulence of these organisms; (*c*) the resisting power of the tissues towards the organisms introduced.

3. The above statements apply not only to suppuration, but also to erysipelas, cellulitis, wound diphtheria, spreading traumatic gangrene, and anthrax, when these attack a wound; they also apply to sapræmia, septicæmia, pyæmia, and tetanus, when these result from the infliction of a wound.

In actual surgery, the first of these axioms scarcely comes under consideration, because *no operation is ever performed without the introduction of some organisms into the wound.* Practically, then, the three objects which the surgeon should seek to attain are:—(1) To introduce as few organisms into the wound as possible; (2) to avoid the introduction of any germs of high virulence; (3) to maintain the resisting power of the tissues at as high a standard as possible. It is possible, by careful attention to these rules, to ensure that practically every wound inflicted by the surgeon upon healthy tissues will heal by first intention. The majority of surgeons attend more or less strictly to the first rule, but the second and third do not receive the attention they merit; *yet they are of quite equal importance.*

Amongst surgeons I find that a good deal of misunderstanding exists with regard to certain problems which evolve themselves in the practice of aseptic surgery. Indeed, the teaching of well known surgical textbooks in this regard is absolutely erroneous. I find that the following list comprises most of the points upon which a good deal of misapprehension exists:—(1) Tissue resistance; (2) wound infections of high virulence; (3) the impossibility of disinfecting skin and hands; (4) the inefficacy of chemical antiseptics as ordinarily used; (5) the extreme difficulty of disinfecting organic substances such as catgut; (7) the classification and treatment of septic wounds. There are several minor points also; indeed, the difficulty is not to what problems to select, but what to reject. I have chosen for consideration two which I think all will acknowledge as of great importance, viz.: (1) Wound infections of high virulence; (2) the sterilisation of ligatures and sutures. I hope to deal fully with all the remaining problems in a work which I shall publish next year.

Wound Infections of High Virulence.—The virulence of micro-organisms varies within very wide limits. There are many organisms which are incapable of becoming pathogenic under any circumstances. Others, such as the streptococcus erysipelatis, are capable even when introduced in the minutest quantities, of setting up very severe tissue infection. A germ of high virulence may be defined as one which is capable of setting up an acute inflammatory disturbance, or of causing severe constitutional symptoms when introduced in small quantity into tissues of normal vitality. Not only do microbes of different species vary immensely in virulence, but there is a wide range in this respect between organisms of the same species. We do not fully understand the factors which cause this variation, but it is certain that the virulence of an organism is usually exalted by a successful attack upon the tissues. For example, the bacillus coli communis in its normal situation, in the bowel, is not an organism of high virulence. Wounds of the rectum, as a rule, heal readily. If, however, the bacillus should make a successful attack upon diseased or injured tissues, its virulence becomes much increased, and it may then become capable of attacking healthy tissues. The same phenomenon has been observed in the case of other organisms, and is, perhaps a universal rule. I am convinced that a very considerable majority of the more acute and dangerous wound infections are due to inoculation with organisms which have been derived from a previous case of similar nature. I believe, moreover, that *in most of these cases, and possibly in all, the infection is carried directly from one patient to another.* We all recognise that such was the case before the days of antiseptic surgery, but many do not recognise the serious danger of this happening at the present day. The reason of this false sense of security is the mistaken idea that the hands can be rendered free from germs. If these infections are really so conveyed it should be easy to discover what are the means by which this may take place. Of all the objects which come into contact with a wound, only two are likely to have come into contact with a previous case of tissue infection. These are : (1) hands ; (2) instruments. Besides these, two other possible sources suggest themselves, viz.: (3) a septic lesion in the patient himself ; (4) catgut. *Hands* are, doubtless, by far the commonest source of acute wound infection at the present day. If once the fingers have become contaminated by pus of other virulently infective material, it is impossible to tell when they will become free from infection again ; indeed, it is high time for us to abandon such a foolish misuse of words as is involved in the phrase "sterilising the hands." In the meantime every wound touched by them may mean disaster. It is, therefore, of extreme importance that the surgeon should strictly avoid contaminating his hands with any such. Fortunately, by the use of rubber gloves it is easy to avoid contamination. The surgeon should always put on rubber gloves before touching any case of severe tissue infection, such as abscess cellulitis, inflamed wound, or any suppurating or infective focus. Even after the inflammation has disappeared, the skin near such a lesion abounds in virulent germs.

The assistant surgeons and nurses at *all* operations should wear sterilised rubber gloves, in order that infection of any kind from their hands may be avoided. Of course the safety as regards infection will be increased if the operating surgeon himself wear rubber gloves ; but there can be no doubt but that they hamper him more or less seriously in operations requiring a delicate manipulation. If he operate upon aseptic cases with bare hands, he should certainly never touch with unguarded fingers any case which has the faintest suspicion of being septic. The surgeon who follows these directions, and uses even moderate aseptic precautions, will have a lower mortality than he who practices the most elaborate asepsis but neglects these rules. The frequency with which accidental wounds heal without suppuration is evidence that the micro-organisms found upon the skin are not often of a highly virulent nature, and are, as a rule, incapable of setting up an acute inflammation where the vitality of the tissues has not been seriously interfered with. But an indefinitely small number of organisms from a case of acute cellulitis, planted in the wound by the surgeon's or assistant's fingers, may rapidly lead to a fatal issue. Yet in many hospitals the house surgeon is allowed to dress suppurating wounds with his bare hands in the morning and to assist at operations in the afternoon. The great difference between organisms from a case of acute sepsis and those found upon the hands, even of dirty persons, is well shown in midwifery practice. It is a common thing to see an ignorant midwife, with hands of the dirtiest description, attend parturient women without the slightest harm resulting. Even when infection takes place, it is, as a rule, of low virulence, and ends in recovery. If, however, a case of acute puerperal septicæmia should occur in the practice of such a woman, she will probably quickly convey a fatal infection to a number of other persons. Custom has wisely relegated the practice of midwifery to physicians rather than to surgeons, otherwise our mortality from puerperal fever would be even more deplorable than at present. I have known the most scrupulous accoucheurs to infect their patients with fatal sepsis derived from previous cases of tissue infection. Those who attend midwifery cases should exercise the same care as the surgeon with regard to infecting their hands with germs of high virulence. Surgeons do not, by any means, always fully realise that surgery owes its very existence to the fact that the healthy skin rarely contains germs of high virulence.

A second possibility of acute infection from the surgeon's hand arises from the possibility of there being upon it a suppurating focus or inflamed sore. In this case he has no choice but to wear rubber gloves. A rubber finger-stall is not sufficient, for pus germs have probably become distributed about the skin of his hands.

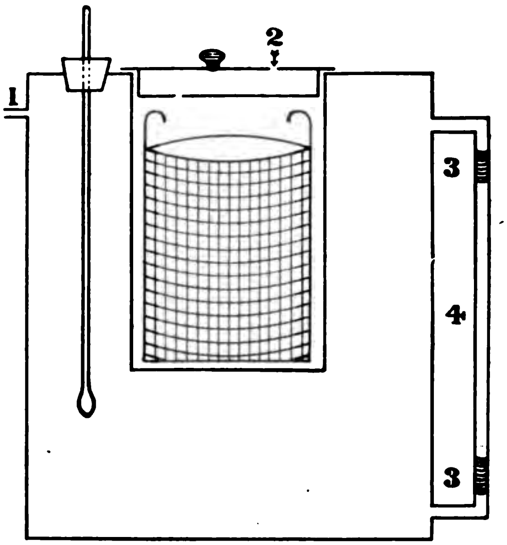
Instruments were in times past the agents whereby the most dreadful wound infections were carried from patient to patient. At the present day we know that by boiling them all infection can be destroyed with certainty, provided that the boiling water can penetrate to every part of the instruments. Such instruments as cannot be boiled had better be destroyed if they have become infected with germs of high virulence. The same applies to sponges. *The patient himself* may be the source of an acute wound infection, by reason of a focus being present in his own body. Thus it is of importance to see that no suppurating lesion, however insignificant, exists in the neighbourhood of the area to be operated upon. Even so small a thing as a suppurating hair follicle may lead to serious results. Even when the patient has a suppurating focus in a distant part of the body it is always possible that he may convey virulent germs to the operation area by means of his fingers. With regard to the impossibility of disinfecting the hands, I should like to draw your attention to the following case. I do not give it as a proof that hands cannot be disinfected, for that has been proved over and over again. I take the liberty of referring you to one particularly able address on the subject by Leedham-Green in the *B.M.J.* of October 1st, 1904. I select this case out of about half a dozen which have come under my notice, because the chain of evidence is very perfect, and because the "disinfection" of hands was carried out in a very thorough manner before my eyes :—

"In July, 1902, I operated upon a case of infective osteo-myelitis of the tibia. A coverslip preparation of the pus showed numbers of large staphylococci arranged in small groups. A month afterwards I operated upon a case of intussusception. The matron, who assisted me, had on that day dressed the tibia, which was still discharging pus. Knowing the danger of infection, I saw that she took special pains to prepare her hands very thoroughly. Lockwood's biniodide spirit method was used. Next morning the child was very well ; the bowels had been opened naturally, and he was taking the breast with avidity. Temperature and pulse were normal. Forty hours after operation the temperature began to rise, and symptoms of peritonitis commenced to manifest themselves. The child died five days after operation. The peritoneum contained turbid serum. A coverslip preparation of this showed large staphylococci arranged in small groups. They were, in fact, morphologically identical with those found in the case of osteomyelitis. They were present apparently in pure culture. In this case a very careful preparation of hands failed to get rid of the organisms ; yet the disaster could have been easily avoided by the use of rubber gloves."

The Sterilisation of Ligatures and Sutures.—The choice of material for ligatures is practically limited to silk and catgut, but for sutures many materials have been used. For purposes of asepsis they may be divided into three classes : (1) Those which may be easily sterilised by boiling, such as wire, silk, linen thread, or horsehair ; (2) those which may be sterilised by boiling, but with greater difficulty, such as silkworm gut and celluloid thread ; (3) those which cannot be boiled in water or steamed, such as catgut and kangaroo tendon. The second class form an interesting group. They can be boiled without affecting their strength, but as they may contain germs within them, and as the water does not penetrate them, the heat must be counted as dry heat, and continued for several hours. I have long been convinced upon clinical grounds that fishing gut boiled for 15 minutes was not sterile, but I did not know the reason. Buried sutures of it proved far more liable to set up suppuration than did those of silk or wire. The third group are destroyed by boiling water or steam. Therefore, their sterilisation is no easy matt

Catgut is made from the gut of sheep. As it comes from the manufacturer it abounds in germs. As it is made by a process of twisting, these germs are present in the centre as well as upon the surface. Moreover, the workman polishes it with oil, rubbed in by hand. In catgut, therefore, we have to begin with an impermeable material containing germs in abundance throughout its entire thickness, which cannot from its nature be boiled or steamed. Lastly, as sheep are liable to anthrax, the gut may have anthrax spores in it. Volkmann records cases of anthrax which he believes were due to this cause. We have also to consider the fact that gut which will not give rise to growth in culture media may, nevertheless, infect wounds. This was clearly shown by the investigations of Klemm. Klemm found that samples of gut which would give rise to no growth, even when teased and chopped into minute particles, was, nevertheless, able to set up severe sepsis when implanted into cats. This failure in culture media may have been due to inhibition by chemicals contained in the gut, or it may have been due to unsuitability in the methods of culture used. From these remarks it will be evident that the absolute and certain sterilisation of catgut presents no easy problem, and many surgeons, finding by experience that they are unable to obtain reliably sterile gut, have entirely abandoned its use. Nevertheless, an absorbable suture is certainly an advantage, for those which are not absorbed occasionally cause suppuration long after the wound has healed. The frequency of this has been exaggerated by some writers. In the vast majority of cases, when suppuration takes place within three weeks of operation, the wound has been infected at the time of operation. Probably in some cases catgut has been used with living microbes in the centre which have been liberated as disintegration of the gut took place. I believe, however, that in at any rate the majority of cases the infection is due to micro-organisms of low virulence from the skin of the surgeon or patient. Certainly buried sutures more often cause suppuration in situations such as the groin, where the skin is especially difficult to disinfect. Occasionally, however, buried sutures suppurate months after operation. In this case, microbes have perhaps been carried by the circulation, and attack the *locus resistentiæ minoris*.

Very many chemical processes for sterilising gut have been proposed. In all these the fat must be carefully removed from the gut in order to allow the chemical to penetrate. One of the best of these is Lockwood's. The gut is scrubbed with soap and water, soaked in ether for 24 hours, and then transferred to a 1 in 250 watery solution of biniodide of mercury, in which it is left permanently. It should remain in this solution for at least three days before using. Biniodide dissolved in methylated spirit is preferable to watery solution, as it gives a better grip to the gut. It is better to have the gut cut into ligature lengths or to wind it in a single layer to facilitate penetration by the solution. *Heat* can be used for sterilising gut and where reliable heat methods can be applied they are preferable to chemical methods. Chemicals have difficulty in penetrating, and cannot be relied upon to kill germs which are buried in organic matter, especially if spore-bearing bacilli happen to be amongst them. A method which will sterilise fifty samples of catgut may fail to sterilise the fifty-first, owing to the presence of more highly resistant germs. The great difficulty in sterilising this substance is owing to the fact that it always contains water, and this combines with the gut to form gelatine when heat is applied. The first step is, therefore, to extract the water. If this be completely done, it can be subjected to very high temperatures. I have heated gut to 200° C. without injury. It is said that gut may be dried by placing it in absolute alcohol, but I have not found this method reliable. The best method of drying gut is by heat. A heat of 80° C. for one hour, as recommended by Krönig, I have not found always sufficient, and therefore heat the gut for two hours at 80° C. To facilitate drying, the gut is preferably wound in a single layer or made into small coils or figures of 8. It is difficult to be sure of drying it properly if wound in many layers. Reverdin used hot air to sterilise gut, but anyone who has worked with a hot air apparatus knows the difficulty of accurately regulating the temperature. This is much more easily managed if the gut be immersed in some fluid medium. Various fluids have been recommended for this purpose, such as alcohol (Jellett), xylol (Brünner), and cumol (Krönig). Although a fluid medium is used, as no water is present, the heat must be counted as dry heat. It is, therefore, necessary that either a very high temperature should be employed or that the heat should be applied for a long time. Krönig heated the catgut in cumol for an hour at 80° C., and then for an hour at 160° C. I have used creasote for the same purpose. The apparatus required is very simple. The catgut is wound in a single layer or made into small coils or figures of 8. For the purpose of drying, I have had special spools made which I exhibit to-night. They consist of two hexagonal metal plates joined by six metal rods. The plates are perforated at their centre by square holes made of such a size as to fit on to the shaft of an ordinary bandage-roller. They have also a small perforation near the margin, through which the gut is passed for the purpose of tying it. I have also made very cheap and efficient spools out of ordinary composition gaspipe, which is easily cut into the required lengths with a knife. The gut is then placed in a beaker and immersed in cumol or creosote. The beaker is covered over with a piece of stout cardboard, perforated by a small hole through which a centigrade thermometer passes. The bulb of the thermometer is suspended in the liquid. The beaker is placed in a sand-bath, and heat applied by a Bunsen flame. The temperature is slowly raised to 80° C., and kept at that for two hours. The heat is then gradually increased to 160° C., at which it is maintained for an hour. As cumol is highly inflammable, I prefer creosote for this process. I have hitherto used a 3 per cent. solution of carbolic in methylated spirit for preserving the gut, but after reading Mr. Leedham-Green's paper in the *British Medical Journal* of October 1st, 1904, I shall in future use plain methylated spirit. Unless great care be observed in the drying process, failure will result. This process is also applicable to gut which has been hardened in chromic acid or formalin. All kinds of creosote do not seem to answer the purpose equally well. I have found Morson's No. 2 quality most suitable. It is an obvious advantage, however, to use a temperature of 100° C. for sterilising gut, for then a water bath may be employed. This makes the regulation of temperature a much more simple matter. Brünner found that in xylol at 100° C. anthrax spores were killed in less than three hours. It is evident that heating at 100° C. for six hours should leave a margin for safety. For this purpose I have designed an apparatus which has answered the purpose admirably. It consists of a water-bath which has a deep well, into which fits a wire basket. The lid of the well, which should fit accurately, has a small perforation to allow the steam from the catgut to escape. A hole in the upper surface of the apparatus allows a centigrade thermometer to be suspended in the water, the thermometer passing through a perforated cork. A small steam escape is placed on one side and a water gauge on the opposite side. The apparatus is made of copper, and the sides are covered with asbestos packing. By reason of this packing and the comparatively large bulk of water used, the temperature can be regulated with the greatest ease. The well is filled to the desired depth with turpentine, and the rest of the apparatus is filled with water. This can be done by removing the cork through which the thermometer passes, and pouring in the water by means of a funnel. The catgut, which should be wound in a single layer or made into small coils, etc., is placed in the wire basket, and this is lowered into the turpentine, and the lid of the well is shut tightly. The temperature is then raised to 80° C., and kept at this point for two hours. The heat is then increased to 100° C., and the water kept boiling for at least six hours. When once this temperature has been reached a comparatively small flame will suffice to maintain it. When the process is completed, the wire basket is lifted out and the gut transferred to methylated spirit, in which it is kept permanently. This process is especially suited to chromic gut, which is not readily penetrated by chemicals.



1.—Steam escape. 2.—Perforation. 3.—Rubber tubing.
4.—Water gauge glass.

The lid is hollow, and the two perforations, each $\frac{1}{16}$ inch diameter, are not opposite each other.

Turpentine is cheap and easily obtainable; it is a good fat solvent, and has a boiling point much above that of water. I do not know why it has not been suggested for this purpose before. The process is an easy and reliable one, and gives excellent results. This process can be used without any special apparatus by placing the turpentine and gut in an airtight receptacle, such as a preserving jar, and then placing the jar in a saucepan of water. A proper apparatus is, however, of great advantage, especially in the drying part of the process.

(Read before the New South Wales Branch of the British Medical Association.)

FIVE MONTHS ASEPTIC SURGICAL WORK AT THE ROYAL PRINCE ALFRED HOSPITAL.

By H. Critchley Hinder, M.B., Ch.M., Hon. Surgeon, Royal Prince Alfred Hospital, Sydney.

My late house surgeon; Dr. Lethbridge, undertook a careful record of all the operation cases which came under our care during the five months of his association with me. It is at his request that I have undertaken the task of placing before you those which were aseptic when they came into our hands, together with a few remarks relative to our method of work. Those results appear to me to be extremely good, and reflect considerable credit on the methods adopted, and still more on the enthusiastic interest of Dr. Lethbridge. The success which has attended somewhat similar methods in private work has been greater still, but this is, of course, to be expected because the risks of sepsis in operative work in a public hospital must of necessity be greater than those one would be likely to meet with in private, mainly owing to the greater number of assistants involved.

The following is a list of the cases:—Recurrent appendicitis, 15; excision of the lower jaw, 1; cholecystotomy, 5; hydrocele, 5; nephrorraphy, 2; varicocele, 5; excision of glands of neck, 3; excision of varicose veins, 4; removal of tubercular glands of axilla, 2; ileocolostomy, 1; removal of ovarian cyst, 1; extraction of bullet from subdural space, 1; amputation of leg, 1; laparotomy for gastric adhesions, 2; for traumatic rupture of liver, 1; removal of undescended testicle, 1; Estlander's operation, with removal of portions of six ribs, 1; tenotomy of sterno-mastoid, 1; salpingo-oöphorectomy, 1; removal of sinus and silk ligature left after oöphorectomy elsewhere two years before, 1; removal of lipoma, 3; hare lip, 1; removal of mammary scirrhus, 1; bursectomy, 1; removal of dislocated semilunar cartilage, 1; wiring of ununited fracture of radius and ulna, 1; inguinal hernia, radical cure, 12 (one of these had a small stitch abscess, perhaps due to the fact that the patient removed his dressings shortly after the operation and interfered with his wound) ventral hernia, 3. Wire frames were used in each of these, and one tilted and pushed its way towards the wound, and suppuration followed, probably because a space was left beneath the frame which became filled with clot and formed a good medium for the growth of organisms. However, out of 80 cases these were the only two showing signs of sepsis, and one could hardly be looked upon as being due to faulty technique.

In addition to these there were six cases of anal fistula. The fistulous track was completely excised, and the wound sewn up with deep silkworm gut sutures. In this way primary union was obtained, and the patients were enabled to leave hospital in 14 days. I might add that recently, in cases where it was not possible to completely excise the fistulous track, by judicious scraping and rubbing the surface with pure carbolic acid, and the application of deep encircling silkworm gut sutures, a primary union was also obtained.

I am afraid that the following details will somewhat bore those of you who are accustomed to the routine of the larger hospitals, but there are others who, let us hope, will be more appreciative. At all events, the mention of the series is valueless unless the details of the system are supplied. It must not be imagined that good results may not be obtained without such great attention being paid to the cleansing of the room and its atmosphere, because an operating theatre, where occasionally pus is spilled, must of necessity be pyogenically more dangerous to the patient than perhaps a room in an ordinary cleanly kept house. It is because a theatre may at any time become surgically a very dirty room that we must increase its possibilities of becoming a very clean room.

At the Royal Prince Alfred Hospital the theatre is washed and hosed throughout; a quart of formalin is placed in a vessel over a spirit lamp, and left with the room completely closed for 12 hours. All bowls and vessels used in the theatre are boiled in a strong solution of soda. The dressings, sheets, and towels are probably rendered sterile in the laundry, and perhaps re-infected with less virulent bacteria in transit. However, they receive a complete sterilisation by means of steam under pressure in a steriliser. Boiling would answer equally well, but it would not be so convenient, although gauzes and towels could be wrung out and dried in a bag of a few thicknesses of linen with good results.

Needles, knives, and scissors are kept constantly in pure lysol. This preserves them from rusting, and sterilises them in a very short time. A saturated solution of soda will accomplish the same result as rapidly. I know it will do it in 20 minutes. Boiling will certainly dull a fine cutting edge. Silkworm gut and horsehair are boiled and kept in glass-stoppered bottles in a solution of 1 in 20 carbolic acid. The catgut is purchased unsterilised in lengths of several yards. It is lightly wound on glass reels and soaked in an excess of ether for 24 hours. This ether is thrown away and replaced by fresh ether, in which the catgut is allowed to remain for a further 24 hours. Having by this means got rid of the grease in the gut, the reels are placed in a solution of 1 in 250 solution of biniodide of mercury and spirit, and left in this solution for at least a week before being used. Should there be any probability of the gut being contaminated, it is put aside and left to soak for another week before being returned to the stock bottle. I might add that in my own private work I keep a stock bottle and a bottle for daily use. Doubtful catgut is always placed in separate dated quarantine bottles, where the reels are allowed to remain in the solution of the same strength for a fortnight before being returned to the stock bottle. Gut so preserved lasts indefinitely. It is tough enough for hernias and equally good for intestinal suture. How long it lasts I know not. In a suppurating wound it softens early. I have on two or three occasions re-opened an aseptic abdominal wound, which had been sutured with buried catgut, a full week after the first operation, and have found the gut a little swollen, and almost, if not quite, as strong as the day it was put in. To my mind there is a purely unwarranted impression abroad that the buried suture must be capable of lasting a very long time. The suture simply cannot last as a tight suture; something must give way, and the living tissues, unable to bear the pressure, suffer from tissue necrosis, so that the long-resisting suture lies loose. Chromicised gut is a suture of this type, and it is said to last a long time, but, after all, the sooner a suture can be dispensed with the better; and if a suture lasts sufficiently long to allow sound union to take place it has done its duty, and is of no further use. Gut prepared in this way I have mentioned, or in any way which does not pretend to specially harden it, has lasted long enough if it preserves the integrity of the part until sound deep union has taken place. However, gut so prepared, used in herniæ or any other abdominal wound, does last, and I have used no other. Rarely, if ever, does one hear of an aseptic abdominal wound bursting open after the tenth day, and it is surprising how firm the union is even at the end of a week. I have been told that this is a bad method of making catgut sterile perfectly, but here are the results, and at present in my own private work I have had a series of 108 clean cases without a single suppuration.

Our hands and the skin of the patient are cleaned in the same way. There probably are other methods quite as good, but some years ago I read a paper before this Association relative to some experimental work I had conducted in aseptic methods, and I then found that the permanganate of potash gave the most certain results. Sterilising the hands occupies about five minutes. The hands are scrubbed with soap and a soft nail-brush. They are then made almost, if not quite, black with powdered permanganate of potash, a little of which may be sprinkled on the hands and then rubbed in with boiled water. The hands are then decolourised either with a solution of sulphurous acid or oxalic acid, and then sluiced in boiled water. During the operation the hands are freely sluiced in a 1 in 200 solution of biniodide of mercury and spirit every ten minutes or so. The spirit toughens the surface and makes the skin less likely to be contaminated by exudations squeezed up from below. I might add that in the ordinary blue biniodide of mercury soap we have an extremely portable and powerful sterilising agent.

In operating, self-retaining and other retractors are freely used. The assistants are are urged to keep their fingers out of the wound. My own touch it as seldom as possible. Swabs are rarely, and, if possible, never turned over in the fingers. Nurses touch nothing that has been sterilised, and the catgut which is left in the wound is never handled. Metal catgut reel boxes are of considerable assistance in preventing t catgut from being handled.

The wounds are never washed out with any sort of fluid, but simply dried with clean swabs. The dressings are plain sterilised gauze and wool, and they are applied with particularly good pressure. Drainage tubes are rarely used, and are removed in one or two days completely.

These methods are, to my mind, about as simple as one can make them. The materials are not difficult to obtain, and are easily carried. Catgut can be made sterile in the way I have mentioned, and it is a method which gives practically no trouble. The great vehicles of sepsis are the fingers, and the safest man is the man who allows the least number of fingers a chance of contaminating the wound and touches least those parts which are to be left in the wound. A man who slops about in a lotion of unknown strength, and satisfied with his baptism, freely handles an open wound, is a very dangerous man. The surgical hands must be aseptic or septic, and in dealing with ordinary injuries and accidents it is wonderful how much can be done with dissecting forceps and needle holders.

I hope it will be clearly understood that we quite believe that there are other methods equally good; but we argue that these are simple, and that they are efficient the results themselves show.

(Read before the New South Wales Branch of the British Medical Association.)

DECIDUOMA MALIGNUM.

By **J. A. G. Hamilton, M.B., Hon. Gynæcologist, Adelaide Hospital; Lecturer on Gynæcology, Adelaide University.**

As deciduoma malignum or chorion epithelioma is comparatively rare, and its mortality exceedingly high, I think it behoves all surgeons to publish the clinical histories and results of treatment in all cases they may come across. So I am following the good example set me by Dr. Worrall, of Sydney, who published a case of deciduoma malignum in last month's *Australasian Medical Gazette.*

It is not my intention to-night to burden you with the many theories as to the pathology and etiology of this disease as advanced by various writers. I showed the uterus extirpated in this case as a pathological exhibit at one of our meetings a few weeks after the operation, but delayed publishing the clinical history until sufficient time had elapsed; and as there has been no return of the disease by metastases, now 19 months after operation, I think I may fairly look upon the case as a cured one.

Deciduoma is undoubtedly a disease which is growing more frequent, or, at least, is more frequently diagnosed. It is astonishing that so grave a malady was overlooked until Sangar drew attention to it in 1898. The growth differs from all other neoplasms. The essential element is a large giant cell. This cell is imbedded in a kind of cellular tisue, which resembles sarcoma. The presence of so much sarcoma-like substance has raised the question whether the disease is not essentially a sarcoma. Bland Sutton holds that it is a sarcoma arising in decidual tissue. From sarcoma, however, it is differentiated by being composed largely of epithelial cells. (I show here to-night a specimen of sarcoma of the uterus which, to the naked eye, at any rate, presents quite a different appearance from the uterus infected with deciduoma malignum.) Roberts, in his work on "Gynæcological Pathology," says: "The synctial theory of the plasmoidal masses seems unnecessary, and the great majority of cases of so-called deciduoma malignum ought really to be classed as rapidly growing sarcomata; the connection of the growth with a preceding pregnancy is not proved in every case, nor its development from structures which can be definitely recognised as fœtal relics."

This appears to have been the view held by most English gynæcologists, until J. H. Teacher published his well-known paper on "Chorion Epithelioma" in 1903. Most of the German, French, and American writers agree with Teacher in believing that these new growths originate from fœtal relics. Teacher concludes his very able and exhaustive article on the subject by saying: "I think it is proved that (1) the so-called deciduoma malignum is a tumour arising in connection with a pregnancy, and originating from the epithelium of the chorionic villi (or its forerunner the trophoblast), which is of fœtal ectoblastic origin. (2) These tumours form quite a characteristic group, clinically, pathologically, and developmentally, and that they should be classified neither as sarcoma, nor as carcinoma, but as a distinct group *sui generis*. (3) The most appropriate name, therefore, is chorion epithelioma (or chorio-epithelioma) malignum."

Deciduoma was formerly supposed to be due to the degeneration changes resulting from a mole pregnancy. Later investigations, however, have shown that the mole is not necessary in its development, although favouring its growth. The disease generally appears during the period of active reproductive life, between 25 and 40, and generally in multiparous women. It follows a normal labour, an abortion, and frequently a hydatid mole. A woman with chorio-epithelioma will present the following clinical history:—In a few days to a few months following the termination of pregnancy, there will be repeated hæmorrhages, increasing in severity, causing marked anæmia. There will be a profuse watery discharge, probably extremely offensive. The continual drain from the hæmorrhage and discharge will cause extreme weakness and a cachetic appearance. If the uterus is curetted, a varying quantity of soft, pliable material will be removed. Curettment of the diseased tissue gives but temporary relief. Hæmorrhages soon return, and a second curettment will remove tissue similar to that removed at the first operation. The diagnosis of this fortunately rare disease is therefore not difficult, at any rate in advanced cases. We have (1) the history of a recent parturition or abortion, especially if a hydatid mole has been discharged; (2) profuse hæmorrhage occurring at irregular intervals, without apparent cause, and not amenable to ordinary means of treatment, and which occurs in spite of repeated curettages; (3) the presence of a dirty sanguinous discharge during the intervals of hæmorrhage; (4) a persistently large uterus, with a patulous os, through which, as a rule, a finger can be passed, and a characteristic nodule felt, springing from the interior of the uterus; (5) anæmia, rapid loss of flesh and strength, and cachexia; (6) the presence of metastatic deposits, especially in the vagina and lungs, the latter producing a cough and bloody expectoration. It is particularly likely to follow mole pregnancy—Berry Hart says in 50 per cent. of all cases. So that a woman who has been delivered of a mole pregnancy should be kept under observation for some time and carefully watched for recurrent hæmorrhages. It is the most fatal of all neoplasms, whether operated on or not. Marchant reports 28 cases with 24 deaths. In 124 recently reported cases the mortality has been 59 per cent. In 52 cases reported before 1897 the mortality was 73 per cent., the better showing in the later series being no doubt due to early recognition and prompt operation. The only treatment is complete extirpation of the uterus as soon as the diagnosis is made by clinical signs and histologic examination; any method short of this is of no avail. Operation should be resorted to even in the suspected presence of metastatic deposits in other parts of the body, for Veit has reported cases in which these secondary deposits disappeared after the primary tumour was removed. As metastases is carried through the veins, extirpation of the uterus by the abdominal method is preferable to the vaginal, for the reason that much handling of the uterus can be avoided, at least until the vessels are secured, and so there is less danger of fragments of the diseased tissue being forced into the veins.

The special feature of the case I am about to report is the length of time which elapsed between the pregnancy and the marked symptoms of malignant disease.

The pregnancy occurred in December, 1901. Hæmorrhage, which was not regular menstruation, commenced in the following May, and continued off and on, but the marked hæmorrhages, with offensive discharges, did not appear till December, 1902. In Allbutt and Playfair's "System of Gynæcology," a case is reported in which a mole abortion occurred in May, 1891, and hæmorrhage commenced three months after; in February, 1902, there was a foul smelling discharge. Total extirpation of the uterus was performed in July, with good recovery. This was 14 months after the mole abortion; in my case the operation was performed about 16 months after the pregnancy. The development of metastasis seems to depend upon (*a*) the degree of malignancy in different cases; (*b*) the lapse of time since the first symptoms appeared; (*c*) the amount of stimulation on wounding the uterus resulting from manipulations intended for treatment. To Dr. Glynn, of Kapunda, is due in a great measure the success of this case, in that he at once recognised the symptoms, and after a histologic examination, proved the scrapings from the uterus to be deciduoma malignum, promptly sent her to town for operation.

Mrs. G., *æt.* 37, 3-para, last child born in December, 1901, was fairly well till the following May, when the first hæmorrhage came on, much more profuse than her ordinary period. From that on there was a constant blood-stained discharge, sometimes blood, and at other times semi-purulent. In December, 1902, the hæmorrhages became more severe, and the discharge became more profuse and offensive. Early in March, 1903, the uterus was curetted by Dr. Glynn; the scrapings removed were examined by Dr. Cavenagh-Mainwaring, and pronounced to be deciduoma malignum. Dr. Glynn sent her down to me at the end of March. When I saw the patient she was profoundly anæmic, with marked cachexia. She had just had a very severe hæmorrhage, and was in an exceedingly low state. Pulse 140, temperature 104°. The stench from the vaginal discharge was overpowering. The uterus could be felt considerably enlarged, a sound passed four inches, a finger passed through the patulous os cervix, impinged on an irregular mass springing from the inner wall of uterus. Her condition did not promise well for immediate operation, so I waited for a few days, so as to improve her condition and clean the cavity of uterus and vagina. The uterus was daily washed out with peroxide of hydrogen and packed with iodoform gauze. She ran a septic temperature, varying from 100° to 104°, and had several rigors, with two or three severe hæmorrhages, but her general condition improved somewhat until the day before operation, when her temperature was 103·4°, pulse 134.

Operation, April 15th: 1*st Stage.*—A free linea alba incision, Trendelenburg position, the right half of fundus, the seat of disease, rose out of the pelvis like a dome, out of the top of which the right tube and ovary appeared to grow; the right round ligament was stretched from the inguinal ring. The surface of uterus showed thin purple softened bulging areas, where the subjacent tumour had approached the peritoneal covering, as in the specimen of soft sarcoma of uterus I have brought here to-night for comparison. The right broad ligament was free. The left, on the contrary, was board-like and contracted (although the growth was on the other side), and the left cornu was drawn down to the pelvic floor, where the corresponding segment of left ureter was found embedded together with the left uterine vessels in fibrous tissue. After the ovarian vessels were tied and divided, the uterine vessels were tied off at the pelvic wall, cut free and stripped off the ureter, which was guarded by an assistant; the big vein below the ureter was torn, but ceased bleeding when it was swung clear of the ureter. On the right side, after the ovarian vessels and right ligament were tied, there was no trouble in tying the uterine; there was no big vein under the ureter in this side.

2*nd Stage of Operation.*—The uterus being drawn up, a bent forceps was placed on either half of the vagina, free of ureters, and the vagina was cut across between these, and an angiotribe placed immediately below them. The bladder fold of peritoneum was sewn to posterior wall of vagina, together with peritoneal covering from rectum; the anterior cut edge of vagina, together with part of base of bladder remained bare in front of top of vagina, and the gauze plug pushed down into vagina from above.

Three days later urine escaped from a small opening in granulating surface of base of bladder; this continued for about 14 days, when it closed up, fibrous tissue replacing granulation. The temperature, immediately after operation, fell to 99, and pulse to 112. She made a fairly good recovery, and was able to leave for home on May 26th. Her health since has been good.

Pathological Report

By W. Cavanagh-Mainwaring, M.B., F.R.C.S., Pathologist, Adelaide Hospital, Lecturer on Pathology, Adelaide University.

The macroscopical specimen which you have had an opportunity of inspecting to-night shows a uterus with appendages which has been entirely removed by the abdominal route. It is but slightly enlarged, the length of the canal being only four inches. There is no alteration in shape, and no dilatation of its cavity. The upper portion of the body is occupied by a tumour consisting of a central portion occupying the cavity of the uterus, which is chiefly composed of blood-clot, and which can be easily removed with the finger, and of a peripheral part, consisting of an infiltration of the uterine wall, with a greyish pink growth, in which are many darker patches from blood extravasation, and which, in parts, has penetrated very nearly through the walls. The growth is confined entirely to the body of the uterus, and for the most part consists of an infiltration, rather than of a definite tumour formation, thus differing from the usual form of sarcoma, which forms a definite, though somewhat ill-defined tumour growing into the cavity of the uterus, altering its shape and dilating its cavity. According to Teacher, the peculiar microscopical features that distinguish a case of deciduoma malignum or chorio-epithelioma consist of three structures: (1) Large epithelial cells with large nucleus that stain distinctly with chromatin dyes, similar to the cells that compose the inner layer of the chorion or Langhan's layer; (2) large protoplasmic masses of varying shape, without definite cell boundaries, which stain deeply with eosin, and are multinucleated and vacuolated, and which at times are represented by a fibrillated meshwork, in the interstices of which blood corpuscles may frequently be seen lying, these masses resembling those found in the outer or syncytial layer of the chorion; (3) cells intermediary between these two.

The microscopical sections shown to-night have been picked out from several sections of different portions of the growth to show these structures, and both the epithelial cells and the large syncytial masses can be observed in different parts. A section through the entire uterine wall and the tumour, proceeding from the periphery towards the centre, shows first of all normal muscular wall which, as the limits of the tumour are approached, becomes split up, leaving spaces between the bundles, in some places empty, in others filled with round cells; upon this supervenes a narrow area of round-celled infiltration, in which are numerous vessels with thickened walls.

The tumour itself consists mainly of a mass of large oval epithelial cells, with a single large nucleus, staining deeply with hæmatin, and frequently presenting karyokinetic changes, the cells being joined together by their edges, without intercellular material. Scattered amongst these are multinucleated and vacuolated masses, staining brightly with eosin, but these are more evident in other sections from different portions of the growth. In the tumour itself no blood vessels were evident, but masses of blood corpuscles were frequent, lying free in the interstices of the tissue, or in some places surrounded by the large syncytial masses.

The central portion of the growth consists of a mass of badly-staining necrotic tissue, round cells and extravasated blood being the predominant features. The tumour, therefore, in its macroscopical and its microscopical features corresponds with the descriptions of typical chorio-epitheliomata, and, though this is the first case I have had an opportunity of investigating, I have no doubt of its nature, which is also borne out by the clinical history and the symptoms.

(Read before the South Australian Branch of the British Medical Association.)

Members of the Victorian Bar Association have subscribed £650 towards the Melbourne University fund. The Chancellor has agreed to a proposal that the money should be utilised to establish an exhibition in the Chancellor's name in connection with the degree of Bachelor of Laws.

GALLSTONES IN THE COMMON DUCT.

By **W. A. Verco, M.B., Ch.B. (Adel.), Assistant Gynæcologist Adelaide Hospital.**

During the last 18 months I have had under my care two cases of gallstone impacted in the ductus choledochus. The first case was that of an old lady of 75 years of age, who was taken ill in December, 1902, with an attack of hepatic colic, and was thereafter jaundiced till March, 1903. During this time she had a good many attacks of hepatic colic, attended generally with a fair amount of collapse. After March, the icterus gradually diminished in intensity until it completely disappeared. The attacks of pain, which used to come every seven or ten days, now had had intermissions of a month, and rarely of six weeks. After these latter attacks the jaundice would reappear for a few days. The paroxysmal pain was nearly always very severe, and necessitated hypodermic injection of morphia or morphia and atropia for its relief. In the early part of 1904 the attacks commenced to come more frequently again, and gradually came back to five, seven, and ten day intervals. On four different occasions the attacks were followed by a temperature, and with distinct evidences of peritonitis. Twice the peritonitis appeared to be general. The last attack of colic occurred in May of this year, and was followed by general peritonitis and death within 72 hours.

The other case was that of a lady aged 49 years. She came to me with a history of several attacks of severe pain in the right hypochondrium during the last three years. After one of these attacks of pain occurring 11 weeks previously she had become jaundiced and had remained so ever since. There were the usual symptoms of obstruction in the common duct and poisoning by bile, viz., great lassitude, loss of flesh, weakness, loss of appetite, sickness, indigestion, flatulence, alternating attacks of constipation and diarrhœa, pipeclay-coloured stools, highly coloured urine, and intense itching of the skin. The obstruction to the flow of bile being fairly complete, and having lasted so long, operation was advised. On March 19th, under ether, a vertical incision was made just external to the rectus muscle, extending from an inch below the costal margin to the level of the umbilicus, and as this was afterwards found to be insufficient for deep working, it was prolonged upwards and inwards towards the mid-line. No gall-bladder could be found until numerous adhesions between the stomach, omentum and hepatic flexure of the colon had been separated. It was found to be very shrunken and contracted, not much larger than a thimble, and with a few stones embedded in its substance. The cystic duct and common duct were both dilated, and had numerous faceted stones in them. There was also a very large calculus at the duodenal end of the common duct. The intestines and foramen of Winslow having been well protected by dry, sterilised mops, the gall-bladder was opened and the stones in it removed. As the cystic duct was dilated considerably, the incision was prolonged on to its under surface, and about 30 stones removed from this opening, a good number of them having been worked backwards from the common duct, care having been taken to prevent them from escaping into the hepatic duct. The large stone in the terminal part of the ductus choledochus was now attacked. It was not easy to move, but after some manual persuasion and finger working, it was gradually forced backwards to just beyond the edge of the duodenum. With the finger in the foramen of Winslow, it was kept in that position, and a stitch run through the wall of the duct at the side of the duodenum, so as to anchor the duct. An incision was now made in the duct, and the stone removed. As no more stones could be detected, the opening in the duct was sewn up with absorbable catgut, using a fine Hagedorn needle. The sewing up was much facilitated by the steadying stitch put in beforehand. The gall-bladder and cystic duct were now sewn to the peritoneum, and a small drainage tube inserted into the cavity. A thick rubber tube was conducted down to the repaired portion of the common duct, and packed around lightly with gauze. The abdominal wound was sewn up in three layers except around the large tube, where two silkworm gut sutures were inserted through the abdominal parieties and left loose. The operation was necessarily prolonged, and was followed by a good deal of shock. The temperature was 102° on the second day, but, with that exception, did not go beyond 99·8°. For five days after the operation, the patient had great difficulty in getting rid of phlegm and mucus from the throat and chest; in fact, on the second and third days it looked as if the inability of the patient to use her diaphragm and the bases of her lungs might cost her her life. The gauze around the large tube was removed 48 hours after the operation, and, as there was no leakage of bile from the repaired common duct, the tube itself was removed on the seventh day, and the silkworm gut sutures tied. From the gall-bladder there was a profuse discharge of bile for some two weeks afterwards, and the jaundice, if anything, seemed to be deeper than before the operation. However, as the swelling in and around the duct subsided, the bile commenced to flow into the bowel, and the motions gradually resumed their normal colour, accompanied by the gradual disappearance of all the other symptoms. The discharge from the gall-bladder had ceased, and the wound healed in a month from the time of the operation.

In operating for removal of a stone from the common duct, it is uncertain, before the abdomen is opened, as to know exactly what one may have to do in the process of extracting the calculus. The difficulty varies with the position of the stone; the deeper the stone, the more difficult the operation. If the calculus is situated behind the duodenum, it may be possible to work it backwards, as was done in this case, or it may be possible to work it near to the edge of the duodenum, then make an incision in the duct behind it, and catch hold of it with fine-bladed forceps, and gradually work it out. Again, the stone may be crushed with the fingers or with padded forceps, and pushed onwards into the duodenum; or it may be needled and so broken up and pushed forward, but, personally, I should not try these methods. Then, again, the calculus may be impacted in the terminal part of the duct, the so-called "Ampulla of Vater," in which case it would be necessary to open the duodenum from the front, incise the valvular opening of the duct into the duodenum, and extract the stone in that way.

There is no doubt that the expectant treatment of stone in the common duct is very unsatisfactory. Consequently, where a stone is arrested in its downward course, and remains in the duct for some little time, in spite of our efforts to dislodge it, the better treatment would be to open the abdomen and remove the stone, if possible sewing up the opening in the duct.

In the case of the old lady, it was decided in the beginning of 1904 that operation was contra-indicated on account of her age. But, thinking over it since, one wishes that an operation had been performed. The disappearance of her jaundice in April, 1903, and its recurrence for a short time after each attack of colic, is evidence to my mind that her common duct had gradually dilated behind the seat of obstruction and allowed the calculus to slip backwards into the dilated part of the duct after the attack was over, and the bile to flow by the side of the stone into the duodenum. With a moderately dilated duct it would be easier to work the stone backwards, to open the duct over it, extract the stone, and sew up the duct again. Twenty-five per cent. of these cases occur in women over 60 years of age, and we should be willing to give them surgical relief, not waiting too long after the obstruction has once declared itself.

(Read before the South Australian Branch of the British Medical Association.)

GALLSTONES IN THE COMMON DUCT.

By Dr. J. C. Verco, M.D. (Lon.), F.R.C.S. (Eng.), Hon. Physician Adelaide Hospital, etc., Adelaide, S.A.

Mr. H., *æt* 50, was seen in consultation on February 17th, 1903. Twelve years before he had pain and jaundice, and again four years ago. From April, 1901, to January, 1902, he had many attacks of colic; then he was better after taking a patent aperient. Now he has been bad since Christmas with occasional severe colic, persistent jaundice, very itchy skin, much biluria, white stools and attacks of pyrexia. When seen on February 17th his skin was deeply icteric, and his trunk and limbs covered with small round scabs due to scratching, none on the soles, very few on the face and neck, and two or three on the ears. No affection of the heart or lungs, no enlargement of the spleen. A lump could be felt in the abdomen on the right side, with its inner border sharp and thin, like a liver edge, running nearly vertically downwards in the nipple line to the iliac fossa, rounded below and with an obscure posterior border about three inches behind it. This was supposed to be the right lobe of the liver with a distended gall-bladder. Urine very deeply bile-stained.

Diagnosis given: Most likely gallstones, and probably a gallstone impacted in the common duct, possibly at the entrance to the duodenum. Improbably, a new growth obstructing the common duct or the hepatic duct; but the history was too long for this, the colic attacks had been frequent, his weight had not been much reduced, and nothing like a new growth could be felt. Exploration by cœliotomy without delay was advised.

The patient was put under ether. Then the liver edge was palpable about three fingers' breadth below the costal margin, as far as the nipple line, whence it ran vertically downwards with a sharp edge to nearly the level of the anterior superior iliac spine, and turned with a curve to the right. It was difficult to decide where the gall-bladder was, as it could not be felt. So I made a vertical incision in the outer border of the rectus opposite the umbilicus about two and a half inches long, intending to palpate for the gall-bladder from within, and then prolong the incision upwards or downwards as might be needed. With the fingers in the abdomen I could feel no gall-bladder below or above, but high up and nearer the middle line I felt what seemed like gallstones joined end to end. So the cut was continued upwards nearly to the costal arch. The stomach with the gastro-hepatic omentum was recognised, the fingers could be passed into the foramen of Winslow, and between them and the thumb could be felt to the left the hepatic artery beating, and to the right of this the dilated common duct with a very large cylindrical stone in it, and a second just below. The stones could be shifted slightly up and down the duct, and downwards behind the transverse portion of the duodenum. Two fingers of an assistant were passed into the foramen of Winslow, and the duct was pushed forward and steadied. Two sutures were passed by curved needles in the long axis of the duct over the stone, and a vertical incision was made between them. The stone was pushed down as far as it would go, and a long narrow uterine curette was introduced into the incision and insinuated above the top of the stone further up the duct, and the upper end of the stone was levered out of the incision, taken in forceps, and delivered. A small one which was at the distal end of the duct could not be felt with the fingers in the foramen of Winslow nor in the ampulla of Vater, and was therefore supposed to have been pushed into the duodenum. The gall-bladder was represented by a bag less in size than a Barcelona nut far up in the portal fissure. But several calculi could be felt in the proximal part of the duct, and these were removed by the scoop, either whole or broken up, and the last were taken away fully two and a half inches from the top of the incision, and seemed to be in the hepatic duct bearing towards the right. After seeking again for the most distal gallstone originally felt articulating with the large calculus (which displayed a deep socket joint), but without finding it, the sutures in the common duct were tied, a rubber tube put down to the hole in the duct, but not in it, and a gauze drain outside this. The abdominal walls were sutured in layers. He gradually sank and lived only two or three days.

The liver was examined post-mortem. The left lobe was a fibroid ear-like appendage, five and a half inches in length vertically, and two inches wide, thin and tough. The right lobe was seven and a half inches transversely and ten and a half vertically. The left edge of the right lobe descended almost vertically, and from the fissure of the gall-bladder it ran downwards for five inches. The gall-bladder was reduced to the size of a filbert nut, with very thick walls, and communicating directly with the common duct, without any intermediate cystic duct. It contained only some thick mucus. The common duct, from the attachment of the gall-bladder to the opening into the duodenum measured fully seven inches, and would readily admit the little finger. The opening into the bowel was very small, so as only to allow an ordinary probe to pass. The duct from the pancreas opened into it about half an inch from its end, and the part beyond Wirsung's duct, which constitutes the ampulla of Vater, was no larger than the rest of the duct. The incision made during the operation was about an inch long, and began about half an inch below the attachment of the gall-bladder. The hepatic ducts were enormously distended. In one which came from the upper part of the left lobe a large calculus was impacted at a distance of three inches from the upper extremity of the operation wound; and at about the depth of two and a half inches along another duct coming from the upper part of the right lobe and deep in the hilus of the liver, two more large gallstones were palpable.

This was a rather difficult case for a first operation upon the common duct; in fact, a satisfactory result was impossible. The duct was filled with gallstones, from the ampulla of Vater, for more than seven inches; about five inches of gallstones were removed either whole or in pieces from the common duct and right hepatic duct, while two more were lodged in the latter deep in the hilus of the liver, and a third far up in the left hepatic duct, only to be discovered by dissecting out these ducts after death. Removal by operation during life was quite impracticable. I was rather surprised to find, post-mortem, that two gallstones had been left in the distal end of the duct behind the duodenum, although I had searched for them there after removing the rest from the common duct. Such search should evidently be very thorough and careful if a calculus is not to be overlooked. I concluded the stone had been pushed by me into the bowel.

Two other lessons were learned. First, this patient would have had a much better chance of recovery had be been operated on some years earlier. Would it not be prudent to perform an exploration in every patient who has a second attack of gallstones, unless a round unfacetted calculus is found in the fæces?

Second, occasionally a case will be met with in which the calculi cannot possibly all be removed. They are so far up in the hepatic ducts as to be not only irremovable but impalpable during life.

(Read before the South Australian Branch of the British Medical Association.)

SARCOMA OF THE UPPER JAW.

By C. H. W. Hardy, M.B., Ch.B., Ballarat, Vic.

F.S., married woman, aged 24 years, inmate of Incurable Hospital, Heidelberg, Melbourne, consulted me on 5th October, 1903.

History.—In April, 1902, she had a tooth, right upper canine, removed for toothache. Six months later (in October) she noticed a numb feeling down the right side of the nose and of the right lip. Three months later, swelling commenced under the right eye, and a little later in the mouth, on the gum. This swelling a medical man at Golden City lanced twice in a fortnight; blood only escaped, and she was told to return in a month. As it only grew rapidly larger, she did not return, but came over to Melbourne on September 12th, 1903.

In Melbourne a consultation was held on her, and the case being deemed inoperable, she was sent to the Incurable Hospital. She does not remember having had much pain, but what pain there was was on right side of face; she does not remember having received any injury. She is now six months pregnant.

On Examination.—Patient is very emaciated. There is an enormous tumour, as shown by photograph (see Fig. 1), on right side of face, forcing the right eyeball forwards and outwards, filling and completely blocking the right nares, projecting below on either side of the teeth of the upper jaw, from the second incision backwards. So far does the growth project downward that the teeth of lower jaw have bitten into the growth, causing a raw, deep, stinking sulcus. Behind, on the hard palate itself, there is only slight bulging. Externally, the tumour extends from the nose to the ear and from below the level of the lower jaw to the right orbit. The skin over the tumour is freely movable.

Patient very courageously consented to risk the dangers of the operation. Two or three doses of chloride of calcium and antistreptococcic serum having been administered on October 8th, at the Ballarat Hospital, assisted by Dr. Lidwell, anæsthetist, and Dr. Deravin, I first performed tracheotomy, plugged the pharnyx, and then, by Ferguson's incision, bared the anterior surface of the growth, and found it only necessary to saw through the hard palate and through the malar bone; the rest of the superior maxilla was almost eaten away. The bones of the floor of the orbit were in pieces, and were removed, but the periosteum was left. The growth extended behind the orbit, pushing the eye forwards and outwards, and then ran down to the base of the skull and down below the styloid process, which came away upon being touched. The right internal carotid was here exposed. The growth extended across into the left nares. From the first incision until the complete removal of tumour the hæmorrhage was very profuse, but on picking up the bleeding points it ceased. The soft palate was not involved, and was accordingly preserved. The growth, on removal, was the size of a breast. The whole raw surface was freely swabbed with zinc chlor., 40 grains to the ounce, and the cavity lightly packed with iodoform gauze. The patient, having lost an enormous quantity of blood, was given an intravenous saline injection of 1½ pints, with sol. adrenalin ½ dr. Next day the tracheotomy tube was removed, and the following day she aborted. Three days later the right cheek became very tender and swollen, due to blocking of Steno's duct. Hot foments gave relief, and the swelling disappeared. At the same time a watery discharge from right ear appeared. Three weeks afterwards the scar under the eye began to retract, and the lower lid to swell, so I introduced a tenotomy knife, and liberally freed the scar. Swelling has since disappeared. The patient was then discharged.

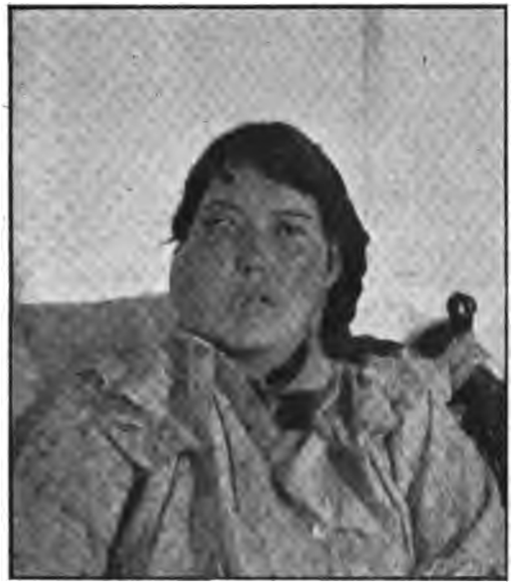


FIGURE 1.

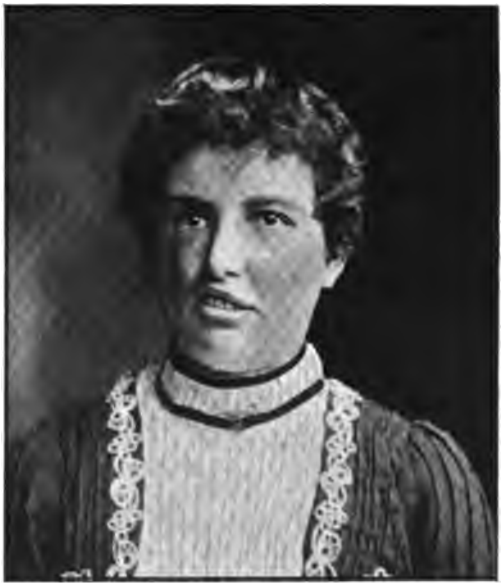


FIGURE 2.

Three weeks ago she reported herself to me, and had an obturator fitted by Mr. S. J. Hardy, dentist, and is now able to talk almost as distinctly as before.

The photograph taken at this time (see Fig. 2) shows how little disfigurement has resulted, and how slightly the eye has dropped. Dr. Lidwell, who examined the specimen, exhibits the slide, and reports the tumour of a mixed type, partly small round-celled sarcoma and partly small spindled-celled, the former type predominating. Here and there may be seen sarcoma elements invading fibrous tissue. The walls of the blood vessels are for the most part made of sarcoma elements.

There are a few points in this case which seem to be of interest. Its onset and history point to its commencement in the antrum. The very slight drop of the eye. even after complete removal of the bony floor of the orbit, is evidently an unusual result, for Cheyne and Burghard state: "As a result of the removal of the orbital plate of the superior maxilla, the eyeball loses the greater part of its support and tends to drop, so that as the scar contracts, the eye looks downward, and becomes not only useless but a source of great discomfort. Where entire floor of orbit has to be removed, we believe that it is better to enucleate the eye at once." Maybe the incision which was used in this case below the orbicularis may have had something to do with the result, as Cheyne and Burghard follow the direction of the fibres of the orbicularis in their incision. The severe uncontrollable hæmorrhage met with will make me in future ligature first the external carotid, although doubt exists as to its efficacy. Butlin says: "Ligature of external carotid does not seem to have been sufficiently successful to encourage a frequent resort to it." Jacobson suggests "temporary ligature of carotid," and Kocher advises "preliminary ligature of external carotid." Ligature of external carotid must have some influence, for Dawborn, without touching the growth, exposes the external carotid on both sides, removes it in its whole extent, with ligature of its branches. Of eleven cases of sarcoma so treated, two died from the growth, one from doubtful recurrence, and the remainder are living and well, from one to eight years after. All his operations were performed in otherwise inoperable cases. It is also suggested that such operation may cause such shrinkage of the growth as to bring it within the bounds of possible surgical removal.

The interference with Steno's duct gave the patient considerable pain and severe mental anxiety. The success so far of this. what was deemed inoperable case, encourages one in the attempt to give the patient at least a chance for life.

(Read before the Ballarat Branch of the British Medical Association.)

CASE OF ECLAMPSIA, IN WHICH FROMMER'S DILATOR WAS USED.

By T. G. Wilson, M.D., Ch.M. (Syd.), F.R.C.S. (Ed.), Assistant Gynæcologist, Adelaide Hospital.

On June 9th I was asked to call and see Mrs. M., as she was having "fits." On arrival I found the patient lying on the bed in a semi-conscious condition. I got the following history from her friends:—She was aged 22; married 18 months; had had a miscarriage, at five months, a year ago, and was now supposed to be eight months pregnant. She had been well up till the last few days, since when she had complained of headaches and abdominal pain, and that morning on getting up had complained of giddiness and seeing things double. She had vomited several times during the last few days, but had not taken much notice of it, as she had been sick, off and on, during the whole of her pregnancy. Her bowels had not been opened for three days. After her mid-day meal she went to lie down, and soon afterwards had a fit, and she had had six or eight fits before my arrival.

I found she had bitten her tongue, which was bleeding slightly. Her colour was dusky, and her skin dry; pupils dilated, and inactive. Pulse was 110, respirations 28, and temperature 99·4°. There had been no labour pains, and no contractions of the uterus were to be felt. The size of the uterus corresponded to about the 8½ month of pregnancy; the lie of the fœtus was cephalic, with the back to the right, and no fœtal sounds were audible. I learnt afterwards that movements had not been felt for 10 days.

On vaginal examination, the cervix was high up; the os was not dilated, nor had the upper part of the cervix been drawn up, and the presenting part had not engaged in the brim of the pelvis. On passing a catheter, about 3 oz. of urine were obtained, which went nearly solid on boiling. Tested later on it was acid; sp. gr. 1030;

⅝ albumen on standing one hour; urea, ·5 per cent.; and microscopically, numerous tube casts were seen. The patient had another fit after being examined.

I advised patient's removal to a hospital, but consent was refused. Patient was given ½ gr. morphia, and was placed in a steam bath. Her bowels were well opened after a high enema. Her skin reacted well to the steam bath, and she was given two pints of saline in the axilla, but she kept on having fits frequently. She had nine attacks in the course of the next few hours, the last one being very severe and lasting about 10 minutes. Her temperature was now 101°, pulse 134, breathing was stertorous; her colour was livid, and she was quite unconscious. No more urine had been secreted, and no contractions of the uterus were to be felt, nor any dilatation of the os, so I decided to dilate the cervix and deliver the fœtus, under chloroform. The cervix, which felt unusually rigid, was first dilated up to No. 14 Hegar, and then Frommer's eight-bladed dilator was introduced, and the cervix dilated up to 9·5 centimetres, and the membranes were ruptured. I now found the occiput was lying posteriorly, but was able to rotate it to the front, and delivered the fœtus with axis traction forceps. The fœtus was a male, weighing 7 lb., and had apparently been dead for some days. The time taken from beginning to dilate the cervix till the fœtus was delivered was 25 minutes. The placenta was easily expressed, the uterus contracting well. A slight tear in the perineum required two stitches. After delivery, the patient had two more fits, not very severe, but she passed a very restless night, not regaining consciousness till early next morning. She was given two pints of saline by the bowel, and another pint in the axilla, and later on, after recovering consciousness, three 5 gr. doses of thyroid extract. At mid-day the patient passed 2 oz. of urine. In the next 24 hours over 110 ounces of urine were passed, and the following day, the urine, on testing, gave sp. gr. 1024; ¼ albumen on standing one hour; urea, 1·5 per cent. Albumen gradually decreased, and was absent on the 14th day. Convalescence was otherwise uneventful. I later on made a visual examination of the cervix, which was not lacerated, and the uterus was in good position.

In the treatment of eclampsia, it is generally admitted that if the frequency and severity of the fits are not soon lessened by ordinary treatment, the best chance for the patient is to empty the uterus, and the more quickly this can be done with safety the better. In a case where labour has not started, or is not started by the toxic condition, the obstacle which confronts us is how to dilate the cervix. We may divide the methods of accomplishing this into two classes—the slow and the rapid—and amongst the former may mention induction of labour by the ordinary methods, such as the introduction of bougies and tents, followed by the dilating bags of Barnes and Champetrier, de Ribes, etc., and amongst the latter are such methods as incisions of the cervix after Duhrssen's method, vaginal Cæsarean section proper, manual dilatation of the cervix after Harris' method, and dilatation of the cervix by one of the mechanical dilators, such as Bozzi's, or one of its modifications — Frommer's, Kaiser's, or Preis'.

I have included manual dilatation amongst the quicker methods, although very often it can by no means be considered to be rapid, as with a rapid os it may be practically impossible to dilate the cervix at one sitting, and the accoucheur will probably remember his efforts by the stiffness of his fingers for the next few days.

Vaginal Cæsarean section is, of course, out of the question, except in a well-equipped hospital, while incisions of the cervix are open to the same objections that have been urged against mechanical dilators, viz., increased risk of hæmorrhage and sepsis, with also the additional disadvantage that the scar tissue left in the cervix may give rise to trouble at any future confinement.

Mechanical dilatation, as originally practised by Tarnier, fell into disuse, partly because of the danger of cervical laceration on account of not being able to apply the dilating force evenly, and partly because of the great mortality from sepsis. With the invention of new dilators, the method has again come into practice, and dilatation by the instruments of Bozzi and Frommer has been extensively practised lately, and it is for this reason I have ventured to bring forward this case. Although the method has had a good deal of adverse criticism, taken altogether it seems to have supplied a distinct want.

The chief disadvantage urged against instrumental dilatation is that there is too great a risk of cervical laceration, which may give rise to hæmorrhage at the time, and may favour septic infection, or later on give rise to the ordinary symptoms of a torn cervix. In regard to laceration of the cervix, it seems to be a question of how the dilatation is done, as if sufficient time be taken it is claimed there is practically no risk of tearing the cervix. About three minutes for each centimetre of dilatation is considered about the ordinary length of time required, and another precaution to be observed is to be sure that the ends of the prongs are right inside the internal os; this applies, of course, to cases where the cervix has not been taken up. And in regard to the other great objection, viz., extra risk of sepsis, it seems to me that the risk of sepsis should be less and not greater, as there is naturally less manipulation by this method than in the methods which cannot be done so quickly. But rather the danger lies, not with the method, but with the accompanying conditions, and we may agree with the summary of Dr. Ballantyne, as recently expressed in an address before the Edinburgh Obstetrical Society, " that there *is* considerable risk of sepsis in cases in which mechanical dilatation is employed, but *not* on account of its employment, but due to the fact that there are several predisposing causes, such as delay in labour, bad health of the mother, and the like; and also to the fact that it is just in these obstetric emergencies and embarrassments that the finer details of obstetric asepsis so often break down."

(Read before the New South Wales Branch of the British Medical Association.)

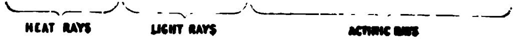
THE HISTORY AND DEVELOPMENT OF THE LIGHT TREATMENT.[*]

By William R. Fox, L. et L.M., R.C.P. et R.C.S. (Edin.), North Fitzroy, Melbourne.

DURING the past few years the remarkable influence exerted by light over certain diseases has been brought prominently under notice by the painstaking researches and successful results published by Niels Finsen and his fellow-workers in this field of therapeutics.

The beneficial effects of sunlight are well known, and the knowledge that it will exert a favourable influence over the animal economy is by no means new. Sunbaths were known and used in ancient times, and at various periods since, and in different places they have been employed with advantage. Now, as you are all aware, sunlight, as well as white light from any other source, is really a composition of a number of complex radiations of very different characters. In order to follow a description of Finsen's researches with advantage, it is necessary to bear in mind the exact composition of sunlight as shown in its spectrum. When a ray of sunlight is passed through a prism its various component radiations are refracted unequally, and the ray of white light is decomposed into a rainbow-tinted band, the most refrangible rays being at the violet and the least refrangible at the red end. The colours appear in the spectrum in the following order: Violet, indigo, blue, green, yellow, orange, and red, and this is the order of their refrangibility. It was found on investigation that the chemical or actinic rays, which exert their influence over a photographic plate, for instance, exist only in the violet end of the spectrum, while the luminous or light-giving rays are found in the yellow and green, which forms its central portion, and the slower or less refrangible heat rays are all found in its red end. It was soon discovered that there were dark or invisible radiations extending beyond the violet at one end and beyond and below the red at the other, and these have been named ultra-violet and ultra and infra-red. The ultra-violet rays are really the actinic or chemical rays which spread through and beyond the blue and violet, and the ultra or infra-red are the invisible heat rays which extend through and beyond the red. Each reaches its point of greatest intensity outside the limits of the visible spectrum; a sensitised photographic plate will, for instance, demonstrate that the point of maximum effect of the actinic rays is a considerable distance beyond the violet, and that these rays can be traced for a very great distance beyond it, while in a like manner a thermopile will show that the invisible heat rays reach their point of maximum intensity some distance beyond the red.

VISIBLE SPECTRUM



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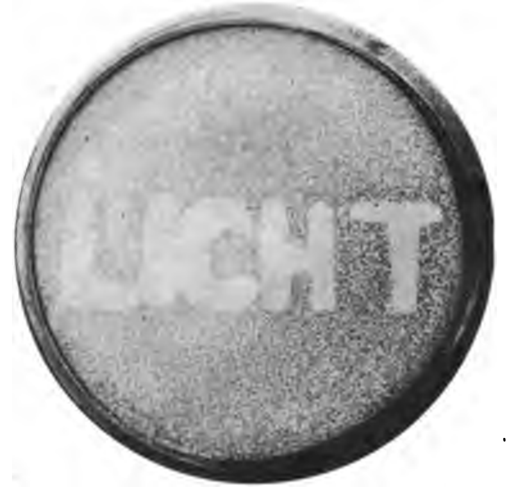
[*] It is to be deeply regretted that since this paper was read before the Victorian Branch of the British Medical Association, news has been received by cable of the death of Niels R. Finsen at Copenhagen.

It follows, therefore, from this complex composition of sunlight that any action it may exert over the animal economy or over disease may be due to any one of its component radiations. On the other hand, it may be the resultant of the combined action of all its constituent radiations. It is this question that has been solved so successfully by Finsen. It must be admitted that although we know that sunlight or solar radiation is the source of all life, all energy, and all activity on this earth, and that not a blade of grass could grow, not an animal live out its ephemeral existence if this were withdrawn; yet, outside its influence on cell life and development in plants and its action on the rods and cones of our retinæ, we for a very long time knew little or nothing of its physiological action or of its general effects, whether good or bad. We know that not a steamship could cross the ocean except for the solar energy of ages past which is stored up in the coal in its bunkers, and that the Trade wind would cease to blow if the radiant solar energy of the present day were to be suddenly extinguished; but we know but little of the reason why these visible or invisible ether waves should influence animal life, animal cell development, or animal pathological conditions. In a word, although we recognise the fact that this world would soon become an inert, dark and lifeless mass if the sun's radiations were to be suddenly withdrawn, yet we have become so accustomed to its daily presence that the question of what influence it may be capable of exerting in disease does not readily occur to us, although it would only be reasonable to expect it to possess some health-restoring power, since it is the very source and origin of life, and, therefore, of health itself.

Now, it was soon discovered that the two ends of the spectrum, the red and the violet, possessed very different properties. The violet rays seem to exert a much more intense physiological action, or at least their influence is more evident. It is now generally known that light exerts a deleterious or fatal influence on the great majority of bacteria. So far back as 1878, Downes and Blunt showed that this action is due to the chemical or actinic rays in the violet end of the spectrum. In 1885, Duclaux published his researches on these phenomena, and declared his belief that sunlight is the best, the cheapest, and the most universally applicable bactericidal agent that we possess. About the same time Arloing showed experimentally that the bacillus anthracis grows better in darkness or in the red or less refrangible rays than in the more refrangible ones. Geisler showed that the same was true of the typhoid bacillus. D'Arsonval and Charrin demonstrated that the actinic or chemical rays are the only ones which exert a destructive influence on the bacillus pyocyaneus, and that the difference between these and the heat rays is most marked in this respect.

The destructive effect of light on the tubercle bacillus is well known, and cultures of this micro-organism are destroyed by exposure to direct sunlight, sometimes for so short a period as 10 to 15 minutes, and it exerts a similar destructive influence ove the bacillus coli. Dr. Bull, of the bacteriological department in the University of Melbourne, kindly prepared for me some cultures of the typhoid bacillus. The dish containing the culture was covered by a cardboard lid in which the letters of the word "light" had been cut. This cover thus resembled a stencil-plate. The dish covered in this way was then exposed to sunlight, with the result, as shown above, that wherever the light fell on the culture medium the colonies of the bacillus failed to grow.



CULTURE OF TYPHOID BACILLUS, SHOWING EFFECT OF SUNLIGHT.

The dish containing the culture, covered with a cardboard lid in which the word "light" was formed by cutting away the cardboard, was exposed to sunlight. Colonies of bacilli have developed freely all over the surface of the medium, except where the sunlight fell. The portions exposed to the light have remained quite free from germ growth, and these clear spaces form the word "light" in the above illustration.

(Prepared for the author by R. J. Bull, M.B., Ch.B., Assistant Lecturer on Bacteriology, the University of Melbourne.)

Turning now from micro-organisms to the animal kingdom, we find the effects of light to be both curious and instructive. The researches of Gräber showed that the earthworm (*Lumbricus terrestris*), which possesses no ocular organs of any kind, when kept in captivity always crawled away to the darkest places. He found that in this respect red light was the equivalent of darkness, and violet light the equivalent of ordinary white light. Decapitated worms behaved in the same way as the others. He arrived at the conclusion that these blind annelids possess the power of differentiating between light and darkness, or, what amounts to the same thing, between red light and violet light by its action on the nerves of the integument. Dubois carried out similar experiments with the proteus. This bactrachian spends its life in darkness in the waters of dark caves in Illyria and Dalmatia. As a consequence of its dark environment, the eyes have become quite rudimentary and are covered by the skin. It is, therefore, quite blind, yet it was able to distinguish light from darkness, and Dubois found that its comfort appeared to diminish from agreeable obscurity to disagreeable light, according to the following scale—darkness, red light, yellow, green, violet, blue, white light, which, you will observe, is the order of the colours in the spectrum. In the chameleon we find an animal which has developed the power of protecting itself against any disagreeable influence of light. As is well known, it is able to change its colour at will, and Brücke found that this is effected by a change of position of the pigment cells of the skin, which are called chromatophores. In light, these remain at the surface of the integument; in darkness they lie deeper. A slow transition from darkness to light produces a change of colouration in this animal, which becomes successively whitish, grey-green, then spotted with black, and finally brownish-black in colour. In other words, the chameleon, instead of changing its position to escape a disagreeable light impression, as the earthworm and the proteus do, attains the same end by altering the position of its pigment cells. No doubt it also resorts to this device for the purposes of disguise when evading enemies or seeking its prey, but that the effect is produced by light is clearly shown by the experiments of Paul Bert and Hoppe-Seyler. They found that red and yellow light have no influence on the chromatophores of the chameleon, while the blue and violet rays produce a strong reaction. Paul Bert illuminated one-half of the body of a chameleon through red glass and the other half through blue glass, and found that the colour of the animal became almost instantly blackish under the blue glass, while it remained whitish under the red.

In the human race the most common effect of powerful sunlight is solar erythema, popularly known as sunburn. It was commonly believed that this was due to the heat of the sun; but it is now proved by the experiments and researches of Unna of Hamburg, Widmark of Stockholm, and Hammer of Stuttgart, that it is not due to the heat rays at all, but is exclusively the effect of the chemical or actinic rays. So far back as 1859, Charcot expressed the belief that solar erythema was due to the actinic and not to the heat rays, but it was not till 30 years after this that Widmark supplied the scientific proof of this contention. Sunburn under an equatorial or tropical sun may be very severe, as an experience of my own shows. I once spent four or five days on the island of Diego Garcia, which is situated about 7° south of the line. Many of the passengers indulged in sea bathing, under the blaze of an equatorial sun, with the result that most of them suffered from severe sunburn. In the case of one man who had had a lengthy exposure, the greater portion of his back and the backs of his legs were more or less covered with blisters, such as results from the application of some vesicating agent. That heat is not the active agent in the production of solar erythema is well shown by the experience of explorers in the polar regions and on glaciers. Even with a temperature below zero these travellers may suffer severely from sunburn from the strong reflection of the sunlight from the fields of ice, and in these cases it is such places as the under surface of the nose and chin where the action is most marked. It is a matter of common experience to become sunburnt when a cold wind is blowing. This inflammation of the skin, caused by the actinic rays of light, differs in several respects from that caused by the heat rays; inflammation caused by heat develops immediately and rapidly, while that from the actinic rays develops only after the lapse of a certain period of time, and does not reach its maximum until 12 to 24 hours after the exposure; heat rays may act through clothing or other covering, but inflammation occurs only in the parts actually exposed to the actinic rays; and pigmentation, which invariably follows the inflammation produced by the latter, does not follow that produced by heat.

This effect of sunlight attracted the attention of Finsen, and in 1893 he made a curious experiment on himself. The negro never suffers from sunburn, and to imitate the colour of the negro's skin, Finsen painted in Indian ink a band about two inches wide along his forearm, which is unpigmented and which he usually kept covered, and then exposed it for about three hours to a very hot sun. He then removed the black colour and found the skin under it perfectly white, while that on each side of it was red. After some hours a very well marked erythema, accompanied by pain and slight swelling, developed. The lines between the affected and normal parts of the skin were extremely clear and showed the same little irregularities which existed at the edges of the black band. The erythema lasted several days, and finally the skin showed a fairly strong pigmentation while the rest was normal. He once more exposed the same arm to the sun, but this time without blackening it. The result was completely reversed: the white area became the seat of the erythema, while the previously affected part, protected now by its pigmentation, escaped. The pigmentation of the negro, therefore, must be regarded as a protective development, which prevents the actinic rays penetrating too deeply, and thus inhibits their inflammatory action on the skin. This conception of the function of pigmentation was first set forth by Unna in 1885. The colour of peoples and of different races of men is thus without doubt influenced by the intensity of the sun's radiation. Excluding other causes, which produce many variations of or sometimes even exceptions to this rule, it may generally be stated that the nearer the Equator the darker the skin, and the more remote the lighter it is. It is a common experience for a native of a temperate region to find that a few years' sojourn in a tropical climate will darken his skin, while it is said that the black colour of a negro diminishes sensibly from a long residence in a cold climate. In the animal kingdom, pigmentation presents some curious features. Putting on one side its useful effect in concealing the animal to protect it from enemies or to enable it to surprise its prey, the function of pigmentation is a protective one against the too powerful actinic rays. It is thus found, as a rule, on the upper part of the animal or the part most directly exposed to the light. It has no doubt been produced as an effect of these actinic rays, but it eventually forms a protection against them. The under part of the animal, that is, the part not directly exposed to the sun's rays, is either quite white or of a whitish colour. Even the skin on the soles of a negro's feet is nearly white, but so also is the skin on the palms of his hands, though perhaps not quite to the same degree. Here it is thought that the thickness of the cuticle may have some effect in producing this lightening of colour. Sunburn affects horses and cattle, but the lighter coloured animals suffer most, while the dark-coloured ones escape it altogether. In spotted or parti-coloured animals, sunburn only affects the light coloured areas. Examples of the protective influence of pigmentation occur throughout the whole animal kingdom —in birds, furred animals, reptiles, fish, and insects. A curious point about the pigmentation of fish is that water absorbs the heat rays and the rays of lower refrangibility, while it permits the violet and other rays of high refrangibility to pass readily through it. In the pleuronectidæ or flatfishes, instanced locally by the sole and the flounder, there is a very curious modification of the form of the body, which in these fishes is very much compressed from side to side, and the bones of the head are twisted in such a manner that the two eyes are brought to one side of the body. The fish thus lies on one side, usually the left, and this lower side, often mistaken for the ventral aspect, is quite white, while the upper or right side is strongly pigmented. Occasionally one finds these fish reversed, the right instead of the left side forming the under surface, and the left side, which in this case is uppermost, is then the pigmented one. It is interesting to note that this pigmentation occurs although these fish lie on the bottom—that is to say, at the greatest possible depth of water in that part of the shore where they habitually live; yet it must be remembered that they are all shallow water fish. Here again the function of disguise or concealment is a very important office of this pigmentation, but whatever function it may fulfil, or whatever use the animal may make of it, the argument advanced by Finsen is that the original and constant cause producing it is the actinic ray in sunlight.

It is impossible within the limits of a short paper to dwell any further on the question of pigmentation in the animal kingdom, a question of very great extent and of considerable importance, but I have pointed out these few instances of it merely to prove that the radiation which reaches us daily from the sun exercises a powerful influence over the skin or external covering of all animals.

In order to test the influence of light, Finsen carried out an elaborate series of experiments with various small animals. Towards the end of fœtal life, the embryo in the egg of the frog (*rana*) and in that of the salamander (*Triton cristatus*) lies coiled up in its transparent envelope. This embryo moves intermittently in such a manner that it turns instantaneously to the opposite side. Under the influence of the violet rays these fœtal movements were very greatly increased, the opposite effect being produced by comparative darkness or by red light. The same results was obtained in experiments on young salamanders after they were hatched. These little animals, about a centimetre in length, remain motionless in the water, like pike when they "sleep." They hardly ever move spontaneously. When they do, they move in a straight line, by rapid jerks, until they come to rest. Under the influence of a beam of light projected on to them, they darted precipitately until out of its range; violet light had the same effect as ordinary white light, but red, yellow, and green did not produce the movements. He then experimented with some earwigs (*Forficula*), some woodlice (*Oniscus*), and a species of beetle (*Pterostichus*), all of which are photophobic. He placed 20 or 30 earwigs in a box, with a lid composed of a series of glasses arranged in the order of the spectrum—red, yellow, green, and blue. When the blue light fell on the earwigs, the little animals showed extraordinary excitement, their antennæ began to vibrate, and they began to run about the box in all directions, until they all finally came to rest under the red glass. The lid of the box was then reversed so as to bring them all under the red light again, with the same result. These experiments were frequently repeated, and at last the older earwigs seemed to grasp the situation; they no longer ran about in an aimless way, but at once made off for the red end of the box. Similar results were obtained with the beetles and woodlice. These little animals, which dislike light, plainly therefore tried to avoid the excitation of the chemical rays. In order to contrast this with the behaviour of animals that are known to like light, Finsen repeated this experiment with a number of butterflies and other light-loving insects, and found that these sought the blue light and avoided the red. The result of these researches was that Finsen concluded that the actinic rays acted as a stimulant and produced an excitation of the nervous system so pronounced that it may in some cases produce well marked reflex movements, as in the fœtus of the salamander, and in others very powerful and special reactions. He admits that the whole phenomenon is very complex. Finsen maintains that the actinic rays exert a harmful effect, such as in severe cases of sunburn, only when intense, and with lengthened exposure. Properly regulated they exert a favourable influence.

(*To be continued.*)

THE NEW ZEALAND SPAS.

By Arthur S. Wohlmann, M.D., B.S. (Lond.), Government Balneologist, Rotorua, N.Z.

THE mineral waters of New Zealand are of the most extraordinary abundance and variety. In this respect few, if any, regions of the known world can compare with that belt of country in the North Island reaching from the central volcanoes south of Lake Taupo northward to Ohaewai, near the Bay of Islands. Throughout a great part of this zone, and especially around Taupo and Rotorua, thermal springs are scattered in the most lavish manner, and untold millions of gallons of hot mineral water run daily to waste. The heart of this district consists of an elevated pumice plateau, 1000 to 1200 feet above sea-level, diversified with rolling hills, extinct volcanic cones, majestic rivers and numerous lakes. Magnificent forests rim round this area, for the most part clinging to the mountain slopes, and only sending occasional outposts down into the barren tea-tree and fern-covered plain. On the east coast, and on several of the neighbouring islands, are also many valuable mineral springs, for the most part almost neglected in the rich profusion of mineral waters.

In the South Island thermal springs are much less numerous, the best known being those of Hanmer, to the north of Christchurch; while isolated springs occur in the central mountainous district and on the west coast.

It will readily be appreciated that scarcely the fringe of the possibilities in the matter of mineral water treatment has yet been touched and that the springs exploited are as but a drop in the ocean of hot water.

Of the large number of visitors who annually flock to New Zealand for mineral water treatment, a considerable proportion are sent by the medical profession of Australia, and I feel, therefore, that a few words on the general scope of spa treatment in New Zealand may be not without interest to those members of the profession who have not had the opportunity of seeing the country for themselves. There are two classes of patients to whom one is in the habit of recommending a change and a visit to a health resort—those who are not very definitely ill, and who merely require an interesting holiday and change of environment, and those who require definite medical advice and guidance throughout their visit.

With the former class we are scarcely concerned here; they are rather tourists than invalids, and their requirements from the therapeutic point of view are modest. For them the change of climate, the relaxation afforded by new men and cities and by fresh aspects of Nature, and the dislocation from the thraldom of the old groove afforded by travel, are sufficient measures to enable the *vis medicatrix naturæ* to have a fair chance. For them New Zealand offers a happy hunting ground—to the sportsmen, to the lover of the beautiful, and even to those who care for none of these things, but who yet can take an interest in the weird or the grotesque.

The invalid, however, who still requires medical tutelage, whose paths must be made smooth, and whose health must be judiciously coaxed back, requires a more exacting catering, and should go to a well organised and definite spa, where he will have the benefit of medical supervision and all the advantages of those therapeutic appliances which form an essential part of the armamentarium of a modern health resort. Of these there are three under Government control, which more or less fulfil the conditions mentioned above—Rotorua, Te Aroha, and Hanmer—and of these, Rotorua only can be said to be at all fully equipped at present.

Rotorua, the best known of the New Zealand spas, is a town of about 1200 inhabitants, and is the *bathing* spa par excellence. From Australia it is easily reached via Sydney and Auckland. Invalids who are too crippled to avail themselves of ordinary means of transit can obtain an ambulance on the wharf at Auckland, which will take them to the railway station or hotel, and by arrangement with the stationmaster a special invalid compartment can be secured in the Rotorua express. It is advisable, however, in such cases to communicate beforehand with the agent at the Government Tourist Inquiry Office, Auckland, as much harassing anxiety will thereby be spared the patient. Ordinary invalids will find the journey to Rotorua easy enough, as the express runs through without change, and is fitted with a dining-car, lavatory accommodation, etc., the worst discomfort being the penetrating pumice dust in dry weather. Rotorua being nearly 1000 feet above sea level, the climate is bracing but changeable, especially in the spring, and invalids should be cautioned to take warm clothing with them.

The waters may be roughly divided into two main groups, the *acid-sulphur waters* and the *alkaline sulphur waters*. The *acid sulphur waters* are used for immersion baths only, and for this purpose they are almost uniquely suitable. Owing their chief properties to the large amount of free sulphuric and hydrochloric acids present, these waters have a very marked rubefacient action on the skin, and immersion in the Priest or Postmaster baths is equivalent to the application of a gigantic mild mustard poultice. The patient sits in the bath for some 15 minutes, and usually emerges with a vivid red, but not sore, skin. This immersion is generally followed by other hydro-therapeutic measures and by half an hour in the cooling-room. The effect of such a bath is of course to act as a general counter-irritant, greatly relieving pain and stiffness of rheumatic and allied troubles, and, by withdrawing a great amount of blood to the skin, easing congestion of the deep-seated organs, muscles, nerves and joints.

THE POSTMASTER SPRING.

Analysis.	Grains per Gallon.
Sulphate of soda	32·87
Sulphate of potash	1·24
Sulphate of lime	4·93
Sulphate of magnesia	1·83
Sulphate of alumina	33·22
Iron-oxides	4·42
Sulphuric acid (free)	30·32
Hydrochloric acid (free)	6·14
Silica	17 61
Total	132·58

Also sulphuretted hydrogen.

The *alkaline sulphur waters* are mild saline waters, strongly impregnated with sulphuretted hydrogen. They are used both for baths and for internal administration, though I am always somewhat chary of giving them by the mouth on account of the very large proportion of silica present.

The waters are used for immersion baths when a sedative action is required either on the nervous system or on the skin in chronic dermatitis. Much of their undoubted sedative influence may, I think, be attributed to the silicates, which impart an almost emollient feel to the water. Owing to this property the alkaline waters are especially valuable for douche purposes, and especially for that form of douche-massage known as Aix massage. In this treatment hot douches under a pressure varying up to about 60 lb. to the square inch are directed on to the patient, while massage is simultaneously employed. The circulation through the manipulated part is thus greatly accelerated, metabolism is hastened, and at the same time, owing to the softening of the tissues by the hot water, massage is rendered more effectual. When still greater stimulatlon is required, rapidly alternating hot and cold douches are utilised as in the Scotch douche, and in various other ways the douching can be varied to suit the needs of individual patients.

In this bath, as indeed throughout the establishment, wherever massage, electricity, or specialised treatment is adopted, the attendants work only to the written prescription of a medical man, which is carried out with the same accuracy that the chemist makes up an ordinary prescription. The great and almost universal abuse of massage and electricity is thereby effectually checked. In addition to douche-massage, special departments are set aside for ordinary dry massage, electrical treatment, and medical gymnastics. The value of these methods in the treatment of many peripheral nervous diseases and of many forms of deformity need hardly be commented on, nor need be the practical difficulties involved in the carrying out of such treatment in the patient's own home. Even in cases of organic disease of the central nervous system, something can be done, provided the process is not too acutely progressive. The disease itself cannot of course be arrested, but much can be done by the regular and patient use of certain graduated exercises to lessen the symptoms, as many an ataxic sufferer can gratefully testify. In addition to the waters, free use is made of the natural vapour (SO_2) and the mineral mud for baths.

In the sulphur vapour bath the emanations of a hot sulphur cavern are admitted to ordinary vapour cabinets, in which the patient sits immersed to the neck, or into which he merely thrusts a limb. Sublimed sulphur is deposited on the skin, which is reddened as by the acid waters, but more quickly and completely. The mud baths are supplied from the natural hot mud pools, the consistency of the mud varying from a soup to a thick porridge. The bath may be used for complete immersion or for local application to a joint or limb, and may be regarded as strictly analogous to a linseed poultice in its mode of action.

In addition to the local waters, several other potable mineral waters, more especially Te Aroha water, are used at Rotorua. It will be seen, then, that Rotorua, while exceptionally favoured with natural advantages, is also fairly well equipped with accessories, and invalids can obtain that medical and nursing assistance which is often so essential a part of spa treatment.

Te Aroha.—While Rotorua is essentially a bathing resort, Te Aroha is more especially a place for *drinking* the waters. The hot mineral waters closely resemble those of Vichy, but are considerably stronger, the most essential ingredients being sodium bicarbonate and sodium chloride. The waters are indicated in many forms of gastric and hepatic dyspepsia, in gout, and in gouty diabetes. Certain of the springs contain appreciable quantities of ferrous bicarbonate, and are indicated in cases of dyspepsia associated with anæmia. Although the amount of sodium chloride in the waters renders them less "lowering" than they would otherwise be, it is not advisable to send markedly asthenic cases to Te Aroha, such as cases of true rheumatoid arthritis.

The subjoined analysis is of Spring No. 15, which is the one used principally for drinking purposes, and is a type of the Te Aroha waters :—

	Grains per Gallon.
Sodium bicarbonate	657·4
Calcium bicarbonate	6·8
Magnesium bicarbonate	2·5
Sodium chloride	59·5
Potassium chloride	11·0
Sodium sulphate	40·1
Silica	7·0
Total solids	784·3
Free carbonic acid	37·4

It must be impressed on patients, moreover, that the waters must be taken with discretion, as otherwise the tendency of the first few days' dosage is to cause an exacerbation of the symptoms, and especially to precipitate an attack of gout. There is a Government medical officer at Te Aroha in charge of the establishment, who will advise patients as to their course of treatment.

Bathing is generally combined with drinking the waters, and indeed the baths at Te Aroha are distinctly inviting. The climate is comparatively mild and sedative. Access: From Auckland by the Rotorua express, changing at Morrinsville.

Hanmer may be reached by rail and coach from Christchurch. The waters are closely similar to the alkaline sulphur waters of Rotorua, but containing less silica are freely used both internally and externally.

The baths are of the usual immersion type, little having yet been done in the provision of accessory appliances. Massage may be obtained, but, unfortunately, is at present perforce left largely to the discretion of the operators, there being no resident doctor. The climate of Hanmer, which is over 1200 feet above sea level, is very fine and bracing, and patients who are in need of thorough tonic influences may with advantage be sent here. It is not advisable, however, to send patients who are very crippled, or who need close medical supervision, as there is a long coach journey, and the nearest medical man is over 20 miles away.

HANMER WATERS.

	Grains per Gallon.
Sodium chloride	62 09
Potassium chloride	·15
Lithium chloride	trace
Magnesium iodide	trace
Sodium sulphate	7 48
Calcium carbonate	·55
Magnesium carbonate	1·77
Ferrous bicarbonate	·05
Sodium bicarbonate	26·6
Aluminium phosphate	trace
Silica	2·63
Total solids	77·38

Gas—sulphuretted hydrogen.

Briefly indicated, the classes of cases that can be recommended to these three health resorts are:—

Te Aroha.—Dyspepsia, especially with hyperacidity; hepatic insufficiency; gouty dyspepsia; chronic gout; gouty diabetes; chronic skin diseases, especially of seborrhœic nature. Te Aroha is contra-indicated in cachectic conditions.

Rotorua.—Chronic gout, rheumatism and rheumatoid arthritis; stiff joints and muscles left as a result of injury or operation; neuritic and neuralgic cases; neurasthenia; chronic dry eczema; some cases of chronic pelvic inflammation.

Hanmer.—Cases requiring bracing climate without much medical supervision; convalescents from acute diseases; mild atonic dyspepsia; chronic cases of gout, rheumatism, and true rheumatoid arthritis, if able to stand the journey.

Tuberculous cases should on no account be sent to any of these resorts, as no accommodation whatever exists for them.

In addition to the spas under Government control, there are others in private hands, such as *Kamo*, with valuable carbonated chalybeate waters, so strongly effervescent that they may some day almost rival the carbonated saline waters of Nauheim; and *Waiwera*, with hot saline waters, charmingly situated on the seashore, within easy reach of Auckland; as well as many others that rely rather on the excellence of their waters than on the completeness of their equipment. But we are dealing now rather with spas that definitely cater and are adapted for the sick. Enough has been said to indicate that in the mineral-water health resorts of New Zealand the profession possesses a useful therapeutic weapon for dealing with that great mass of chronic diseases which are so troublesome to treat at home with ordinary medical measures.

CASE OF ABDOMINAL HYDATID.

By A. M. Cudmore, M.B. (Adel)., F.R.C.S. (Eng.), Hon. Surgeon to Adelaide Hospital.

I THINK that the great majority, if not all, of the members present will agree with me when I say that the great difficulty in the operative treatment of hydatid cysts is in the direction of securing primary union in the walls of the cavity that is left after the evacuation of the cyst. At present the general operation, at least as far as my observation goes, consists in incision and removal of the parasite, and subsequent drainage. This proceeding is much too often followed by infection, not at the time of operation, but subsequently by way of the drainage tube, during some one of the frequent dressings that are required.

As long ago as 1881 this fact was recognised by Thornton, of the Samaritan Hospital, London, and a case is quoted in the *Medical Times and Gazette* of January, 1883, where this eminent surgeon treated a case of hydatid cyst of the liver by evacuation of the parasite, subsequently stitching the opening in the liver to the abdominal incision and closing the external wound without any drainage whatever. The case did well. The wound was not dressed until the eleventh day, when it was found to be quite healed, and the patient left the hospital on the twenty-seventh day cured. This success, however, did not meet with the recognition it deserved, and it was left to Bond, of Leicester, to bring the subject again before the profession. He published an account of an operation for abdominal hydatids which was entirely intraperitoneal. The cavity of the cyst being incised, its contents thoroughly removed, the wound in the cavity was then closed by sutures, the whole dropped back into the abdominal cavity, the wound in the abdominal parieties closed in the ordinary way. The case did well. This success, however, influenced but little the operative procedure in such cases, and some few years later Hamilton Russell, of Melbourne, brought the subject forward again, advocating strongly the intra-peritoneal method, with the modification of not closing the wound in the cyst cavity, in order that the serous effusion might find its way into the peritoneal cavity, where it would be more readily absorbed than if retained in the adventitious sac of the parasite. This would appear to me to be the ideal method of treatment in all uncomplicated cases, if one could be sure of two things: firstly, that it were certain that the whole of the mother and daughter cysts were thoroughly removed; and secondly, that one could be absolutely sure of the exclusion of sepsis. The difficulty of being sure of the former is very great, and is illustrated by the case quoted below, where, after taking every care to ensure thorough evacuation of the parasite, still at a subsequent date two small daughter cysts were discharged; while, with regard to the second danger, though infection at the time of operation theoretically should be impossible, still, practically it does occur, though fortunately but rarely, and the possibility of infection from the duodenum along the bile ducts must be borne in mind. Taking these facts into consideration, I thought that I would try the effect of treating the cavity left after the removal of the parasite in a similar manner to the recognised treatment of large dead spaces left after any other surgical operation, namely, partial closure of the wound and drainage for 24 to 48 hours, to ensure the exudation of serum not filling the cavity and preventing the coaptation of the walls, at the end of which period the drain to be removed and the wound allowed to close by first intention. So far, I have only had an opportunity of trying it in one case, though two separate cavities were treated in the same subject, and the result, which was shown at our last monthly meeting, is, I think, a very satisfactory one, and sufficiently encouraging to justify an extended trial of this method, which had previously been carried out by Dr. Newland with success. The following are the notes of the case:—

J.C., an aboriginal, *æt.* 42, was admitted into the Adelaide Hospital with a swelling in the abdomen, which he had first noticed 30 years ago, and had gradually increased in size. On examination, this was found due to two large distinct cystic swellings—one in the upper part of the abdomen, distinct from the liver, the other entirely filling the pelvis and right iliac fossa. On September 2nd the patient was anæsthetised, and, assisted by Dr. Frank Magarey, I made an incision in the median line, above the umbilicus, and a large hydatid cyst was exposed. This was incised, and about two quarts of daughter cysts of varying sizes removed by forceps and douching. The cyst was in the mesentery of the jejunum, and the edges of the opening were sewn up to the peritoneum. The wound was closed in its upper part, and a rubber drainage tube placed in the sac. Another incision was then made in the hypogastric region, and the second cyst, which entirely filled the recto-vesical pouch, exposed and treated in the same way; greater difficulty was experienced in removing the daughter cysts. Twenty-four hours after the operation the tube was removed from the upper wound, whilst that from the lower wound was left for 48 hours, on account of the greater amount of serous discharge. Five days after the operation the upper wound had ceased discharging, but a small hydatid skin came away from the lower wound, and again on the tenth day another small skin escaped. The note on September 13th, 11 days after the operation, was "both wounds quite closed and dry." Eighteen days after the operation the patient was up and about, but was kept under observation until October 10th, when nothing abnormal beyond the induration about the scars was found.

For the above notes I have to thank my late house surgeon, Dr. D'Arcy. In a previous case of a liver hydatid in a child, *æt.* four, I followed the method adopted by Thornton in 1881. The wound healed, and the child was discharged on the seventh day, but on the eighteenth day after the operation the wound was found bulging, and an ounce of bile-stained pus was liberated.

(Read before the South Australian Branch of the British Medical Association.)

A NOTE ON KOCHER'S OPERATION FOR HERNIA.

By Charles MacLaurin, M.B. (Edin.), Hon. Assist. Surgeon to Royal Prince Alfred Hospital and the Women's Hospital, Sydney.

In this method the sac is invaginated and brought out through a little hole cut in the abdominal wall, where it is sewn in position; the canal is then closed by sutures. Some years ago it was in high favour, under the influence of the mystic phrase "transplantation of the sac," but recently it has not been so popular; and in the following three cases it was certainly not satisfactory.

Case 1.—Young woman; inguinal hernia. Operated on by Kocher's method; aseptic healing. A month after she got up a new hernia appeared, and I again operated upon her. A piece of intestine had forced its way through the little opening made for the sac in the former operation, although this opening was originally only large enough to admit the point of a pair of forceps. It was now a ring of a size to admit the finger, with exceedingly hard and tense edges.

Case 2.—Young woman; double inguinal hernia; muscles lax; physical development feeble; Kocher's method on both sides. The left hernia returned after six weeks, and on cutting down I found that it had forced its way through the little hole, which it had enlarged to about half an inch across. The internal ring was represented by a firm scar, where the edge of the muscle and tendon was still adherent to Poupart's ligament. The muscle wall was, however, very lax, as on the former operation, and the finger could be pushed through it almost anywhere.

After two years the right hernia also returned. On operating here I found a substantially similar state of affairs, except that I did not investigate the condition of the internal ring. In all these cases I proceeded by sewing up the new ring in two layers, pleating the second one over the first.

There are one or two lessons to be learnt from this experience. Firstly, there can be no doubt that these three herniæ were more dangerous than the original condition, and that they were directly due to Kocher's operation.

Secondly, the firm union of the internal ring in the second case shows us that it is not hopeless to expect muscle to unite to Poupart's ligament. On the contrary, in this case the union was actually stronger than the muscular wall itself. I think this is sufficient answer to the criticisms upon the proposal to pleat the muscle over and unite it to the lower edge of Poupart, thus covering and fortifying the first line of sutures.

A further objection to Kocher's operation is that there exists a slight risk of catching intestine, the appendix, or omentum in the fold of the sac within the abdomen. A case of this occurred in the practice of a surgeon here, leading to fæcal fistula.

On the whole, the dangers of Kocher's operation rather exceed its good points. The latter it shares with several other methods; the former are entirely its own.

LARGE RENAL CALCULUS UNDISCOVERED BY X-RAYS.

By Alfred E. Perkins, M.A., M.B., M.Ch., D.S.O., Sydney.

G.B., 26, single, brickmaker, first came under my notice on May 7th, 1903, complaining of pain in the back, extending round the right side into the right groin, and sometimes affecting the right testicle. Three months before this he had passed some blood in his urine, and this occurred about once a month for five months. The pain was not continuous, and was not accompanied by vomiting. It was always very severe a day before he passed blood, and on these occasions extended down the right thigh to the knee. He had what he believed was gonorrhœa some years before his recent illness, but had not been treated by a medical man; otherwise had always been healthy.

He was admitted to the Marrickville Cottage Hospital on May 21st, 1903, with a view to operation.

On Admission.—He was well nourished, but pinched looking about the face. He walked with stiffness on the right side, and carried the right shoulder lower than the left. Stepping up, as on to the kerb, gave him great pain on this side.

On Examination.—His lungs were healthy, heart and alimentary system normal. He complained of tenderness in the right flank, just above the anterior superior spine of the ilium, and also of tenderness on pressure of the right kidney. The right kidney was enlarged, and harder than the left, and also moved more. The urine contained considerable quantity of pus and mucus, with few cells.

He was examined under an anæsthetic on May 22nd, when it was decided to have a radiogram of the kidneys and ureters taken. This was done on May 25th, but proved negative. Treatment was continued for some time, but without very much benefit, and he was again admitted to the Marrickville Cottage Hospital in March, 1904, when I removed from the right kidney a stone weighing 115 grains. From its size, a considerable incision was necessary in the kidney substance; this was packed with gauze, and removed 36 hours later. When removed, profuse hæmorrhage occurred; this was almost instantly stopped by inserting into the kidney wound a strip of gauze soaked in adrenalin solution. The patient has made an uninterrupted recovery. The stone was pyramidal in shape, and composed of uric acid, with a covering of phosphates.

This case seems of sufficient importance to record, as though the positive evidence of the X-rays in such cases is invaluable, still the absence of such positive evidence, even in the case of a large stone, does not negative its existence. The failure of the X-rays to indicate a stone, too, may render it much more difficult to obtain the patient's consent to operation.

Another case of the same nature came under my notice about the same time as the above, and in this case also X-rays failed to indicate the stone, which was of uric acid, and was passed quite recently. In the second case the stone was of comparatively small size. In each case the radiogram was taken by different men, well skilled in X-ray work.

CLINICAL AND PATHOLOGICAL NOTE.

A NOTE ON THE ABORTIVE TREATMENT OF FURUNCLE.

Boils are of small consequence, but they are very irritating and painful, and so many complicated methods of treatment have been recommended, with more or less success, that, like the treatment of fractured clavicle, the simplest is the best.

I have found the application of tinctura benzoini composita a "specific." It is antiseptic and protective, and when it is applied freely around and over the boil, it acts as a support to the immediately surrounding skin, and exercises uniform pressure on the boil or pimple itself. If applied within about 24 hours of its appearance, or before suppuration has begun, the boil will be aborted. Often one application is sufficient even in the case of large boils, wherever situated.

A. G. E. Naylor,
L.R.C.P. and L.R.C.S. (Edin.).
Foster, S. Gippsland, Victoria.

REVIEWS AND NOTICES OF BOOKS.

Tuberculosis and Acute General Miliary Tuberculosis. By Dr. G. Cornet, of Berlin. Edited, with additions, by Walter B. James, M.D., Professor of the Practice of Medicine in the College of Physicians and Surgeons, Columbia University. New York. Philadelphia. London: W. B. Saunders & Co. 1904. Melbourne: James Little. Price, 25s.

This work is the seventh volume of the American edition of Nothnagel's Practice of Medicine. It will come as a boon to those who do not read German, Cornet's name and fame being world-wide and the translation exceedingly well done. Additions to the texts have been made by the editor where necessary to bring the information up to date. These are distinguished from the authors' own words by being enclosed within brackets. The treatise is divided into three parts: the first treats of the etiology of tuberculosis, the second of pulmonary tuberculosis, a special chapter on the chemistry of the tubercle bacillus by Dr. E. R. Baldwin, of Saranac Lake, being introduced, and the third of acute general miliary tuberculosis.

It is impossible in the space permitted to this review even to enumerate the many points of interest discussed in this work. It must suffice to mention a few of the more important matters which are at the present time attracting professional and popular attention. One of these is the relation of human to bovine tuberculosis, on which the editor summarises the present state of knowledge in the following paragraphs:—1. "The bacilli of human and bovine tuberculosis are the same organism, but modified in their activity by change of hosts. By transmission through cattle they acquire increased virulence for cattle, but lessened virulence for man. 2. There is good reason to think that primary tuberculosis of the alimentary tract in infants is acquired chiefly from the milk of tuberculous cows; but it must be remembered that primary intestinal tuberculosis is a very rare condition. 3. The doctrine of the hœmatogenous origin of pulmonary tuberculosis, either as an immediate result of an intestinal infection or as the outbreak of an infection latent since early infancy (Behring's theory), has yet to be proved, but must at present be regarded as a possibility. Finally, in view of all the facts that are at hand, we are not justified in relaxing in any measure our efforts to prevent the use of tuberculous milk and meat, or to prevent the dispersion of bacilli by the sputum of consumptives."

In discussing tuberculin as a diagnostic agent, Cornet says that "its value in obscure cases of pulmonary tuberculosis has become more and more firmly established, and its harmlessness, when properly used, has been proved by the results in many thousands of cases. It should never be given in cases with fever or in cases in which a previously active tuberculosis has only recently become latent." As a therapeutic measure he employed it when first introduced "in large doses," and observed in a number of cases, some of which were well advanced, that marked improvement and recovery followed, but it undoubtedly made some cases worse, and in five it hastened the end." He then used smaller doses, "but with them has never noticed the astonishing improvement which occasionally followed the employment of the larger doses, so that it is difficult to determine how much of the results is to be attributed to the tuberculin and how much to the associated hygienic and dietetic procedures. On the other hand, the larger doses can no longer be regarded as admissible in view of the occasional accidents." He concludes by saying that "in cases in which the hygienic and dietetic measures, duotal, creosotal, etc., are unavailing, tuberculin should be given a trial, even now unless the disease is very far advanced or there is a secondary infection." Tuberculin undoubtedly contains a curative body, but its correct use, its preparation is not yet possible." If this is all that can be said for tuberculin we think the prudent practitioner will avoid its use, except as a diagnostic agent in a few early and doubtful cases. The drug and serum treatment of tuberculosis is gone into very thoroughly. Nothing that has been employed or even suggested would appear to have been omitted. We note one omission under the head of prophylaxis, namely, notification, which is only casually referred to. A full bibliography and a good index add to the value of the book, which is, we think, the most comprehensive that has yet been published on the subject of which it treats. We can strongly recommend it to both the student and the practitioner.

P.S.J.

AMERICAN EDITION OF NOTHNAGEL'S PRACTICE OF MEDICINE; DISEASES OF THE PANCREAS, SUPRA-RENAL GLANDS AND LIVER. By Drs. Oser, Neusser, Quincke, and Hoppe-Seyler. Edited with additions by Frederick A. Packard, M.D., and R. H. Fitz, M.D. Philadelphia: W. B. Saunders & Co. Melbourne: Jas. Little. Price, in cloth, £1 5s.

One turns with special interest to the section on the pancreas, which has lately come into importance from a practical point of view; we find that Professor Oser has made a most conscientious attempt to present a full description of the diseases of this organ. It is a great pity that such a long interval elapsed between the publication of the German and American editions. It is true that the American editor, Professor Fitz, has made additions, embodying the results of recent work, at the end of every chapter; such additions being enclosed in brackets. But this method interferes with the continuity of the narrative. It would add enormously to the value of the English translation if it could be published at the same time or shortly after the issue of the original German edition. There is nothing to indicate when the German edition was published, but the latest references in the bibliography at the end of the section are dated 1896, while the American edition was published in 1903. The editor has apparently done his best to make good the deficiencies, the most important of the recent work being by Mayo Robson and Opie.

With regard to the sections on the supra-renal glands and liver, the same objections hold to a less extent, as the more recent work has not the same importance. The work of the translator has been well done. J.M.G.

HUSBAND'S FORENSIC MEDICINE, TOXICOLOGY AND PUBLIC HEALTH. Revised by Buchanan and Hope. Seventh edition. Edinburgh: E. & S. Livingstone. Price, 10s 6d net.

This edition of this well and favourably known work has been most thoroughly revised and brought up to date in every particular.

We note that due importance has been assigned to the value of the biological test for blood. A new departure in this edition is the addition of carefully-written articles upon the important subjects of putrefaction, alkaloids, leucomaines, and food poisoning. That portion of the book which is devoted to public health is especially good, and will be found of much value to those whose work as Government medical officers brings them at times into relation with many of the subjects referred to therein. Both the text and the illustrations are excellent, and reflect much credit on the publishers. S.J.

A TEXT-BOOK OF SURGERY FOR STUDENTS AND PRACTITIONERS. By George Emerson Brewer, A.M., M.D. New York and Philadelphia: Lea Bros. and Co. Sydney: L. Bruck. Price, 16s.

The author is of opinion that there is a need for a comprehensive and abridged text-book of surgery; certainly this book is more abridged than comprehensive. It would be far better for the student to have a sound knowledge of a few general principles than to have a scrappy idea of a host of details.

If the general practitioner wishes to refer to a book for additional information about a subject with which, he is not too familiar, he needs, or should need, something less abridged and more satisfying than the contents of this work. What is the use of a book of reference dealing with focal epilepsy in one page, or tumours of the brain in two or three pages? In fact, the practitioner or student who needs such a book owes the profession an apology for his existence. H.C.H.

ENLARGEMENT OF THE PROSTATE: ITS RADICAL TREATMENT AND CURE. By Mansell Moullin, M.D. (Ox.), F.R.C.S. Third edition. London: H. K. Lewis. 8vo. 6s

This is one of the very best if not the best book dealing with enlargement of the prostate. In this, the third edition, the work has been brought well up to date. The author never spoke more truthfully than when he states: "There are few who will fail to agree with me that the pain and inflammation which used to occur in the course of the complaint with such frequency were often as much the result of the treatment as of the disease." Catheterism may sometimes give rise to the most perplexing inflammatory conditions about the prostate and vesiculæ seminales. It may, even when conducted with every care, establish septic conditions, which will prove fatal within a few days, or at a remote period. It may again in rare cases allow a man to jog along until death overtakes him from another direction. The mortality of catheterism certainly is greater than that of operative treatment when both methods of treatment are undertaken in an aseptic bladder. H.C.H.

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ASEPTIC SURGERY.

No one can deny that the greatest advance which has been made in surgery in recent years has been in the direction of a diminution in the mortality from sepsis after operations, and all the efforts of surgeons in the present day appear to be directed towards stopping every possible mode of ingress of pathogenic organisms to operation wounds.

The paper read by Dr. VALLACK, of Bowral, at the meeting of the New South Wales Branch of the British Medical Association last month, and published in our present issue, gives an exhaustive account of some of the methods adopted by modern surgeons to secure immunity from sepsis. Some very important points were brought out in the course of the discussion upon this paper, and it is well that we should all profit by the experiences related by others.

It cannot but be a matter of heart-searching when a surgeon, after getting his hands contaminated with pus from a septic case, operates shortly afterwards on a clean case, and the patient succumbs to sepsis as the result of infection from the surgeon's hands. We are told by Dr. VALLACK, and the experiences of others confirm this point, that it is practically impossible to be certain of sterilising hands which have been in contact with pus, until after the lapse of several days. If, however, circumstances necessitate a surgeon operating on a clean case before sufficient time has elapsed to secure efficient sterilisation of his hands, then the use of rubber gloves will prevent the danger of sepsis to the patient. All, however, are not agreed either as to the practicability of operating with the necessary amount of delicacy with rubber gloves, or as to the complete efficacy of these in preventing contamination of a wound with septic organisms.

A large amount of experimental work has been done on the efficiency of the various methods adopted by different surgeons to sterilise the hands, and it would appear that they are all quite useless for securing sterilisation of the hands from a bacteriological point of view; and if the hands have been in contact with pus they are ineffectual even in cleansing the hands sufficiently from pathogenic organisms to prevent the possibility of infection of clean wounds. Under these circumstances it would appear to be highly desirable that a surgeon whose hands have been in contact with infective material should not operate upon a clean case unless with the use of rubber gloves, at least for some days.

The sterilisation of ligatures and sutures was another point dwelt upon very fully by Dr. VALLACK and other speakers, and the great difficulty in securing this end without injuring the material used is apparent from the variety of methods suggested for the purpose. In this connection, a most important point was mentioned by Dr. CRAIG, that even after the complete sterilisation of these important parts of the surgeon's armamentarium, there is a danger of them becoming again septic, if handled too much by nurses or assistants before being introduced into the patient's body. We would commend Dr. VALLACK's paper and the discussion which took place upon it to the careful study of all who are engaged in operative surgery.

DOCTORS AND THEIR WORK.

MR. BRUDENELL CARTER has, we think, done good service in his book on "Doctors and their Work," in endeavouring to "bring objects and methods than now commonly prevails, and to show patients in what way they may best co-operate with their physicians for the attainment of ends which both classes are bound to regard as of primary importance —the relief of suffering and the prolongation of life." While the work is thus intended primarily for the enlightenment of the general public, it yet contains much which it would be well for every practitioner, and especially the younger generation, who are still in their student days, or are just beginning to practice, to take to heart.

His early chapters on medical students and their preliminary and professional education contain some strong comments upon current methods of education, with which, in the main, we entirely agree. Mr. Carter's long term of service on the General Medical Council of Great Britain enables him to speak with some authority on these matters. The preliminary training of the future medical student is surely a matter of supreme importance, and Mr. Carter very properly emphasises the necessity of a careful training in the English language and literature. He reminds us that the main object of the medical man is in search of "the truth," and unless the practitioner be carefully trained to speak and think accurately, he inevitably drifts into the use of slipshod phrases and expressions, which are not the "truth"; and he accordingly fails to acquire accurate knowledge. It is true medicine is not an exact science; much of it is hypothesis, and hence there is the greater necessity that the practitioner should not confound theory with fact, and should by careful use of language not lead himself into false positions.

Then, again, the preliminary education must lead the student to observe and think for himself. Spoon feeding is too much the order of the day in our systems of education; those special faculties which are so about a better understanding of medical essential to the practitioner in after life are not "educated"; and medical practitioners are too often reduced to mere mechanical prescribing and operating, without a careful consideration of all the circumstances of the case.

The subsequent chapters of this book are full of interest and instruction, and show plainly the difficulties which beset both practitioner and patient in their respective efforts to restore and regain health. He refers to the essential evils of quackery and self-medication, and his arguments should have a beneficial effect if read and studied by the general public. But, unfortunately, the general public regard all our utterances as those of interested parties, and an attack on quackery is considered as the outcome of professional jealousy. There are many other points of interest to which we may refer on a subsequent occasion, but in the meantime we would urge all our readers to secure a copy of this very readable and instructive work.

THE MONTH.

Sale of Patent Medicines in New Zealand.

The Government of New Zealand are to be commended upon their action in making new regulations under their Health Act of 1900 dealing with the importation and sale of patent medicines. In future "all patent medicines imported into or sold or offered for sale in the colony shall be required to have the contents, with their exact proportions, legibly set out in English upon a label affixed on the bottle, box, or container. In addition to such information, where such medicine contain one or more of the poisons scheduled under 'The Sale of Poisons Act, 1871,' and its amendments, the words 'This contains poison' must be marked in clear, medium-sized block type upon the label." Some 160 well-known proprietary medicines are enumerated as coming under these regulations, and any person who commits a breach of or fails to comply with any of the foregoing regulations shall be liable on conviction to a penalty not exceeding £50.

Precaution Against Fires in Hospital.

The great importance of being prepared for a possible outbreak of fire in hospitals has been emphasised by the authorities of the Royal Prince Alfred Hospital, and they are determined that all the resident staff, both nursing and attendants, should be thoroughly efficient in dealing at once, and effectively, with an outbreak of fire. Fire-fighting appliances are distributed all over the building, and on a recent occasion some 70 nurses and attendants were drilled in the use of them. It is proposed that these fire drills should be repeated at intervals, and it would be well if every hospital adopted the same precautions. This is particularly necessary in the large asylums, which are nursed by a comparatively small staff, and the hospitals for the insane, in which an outbreak of fire is so liable to occur. We need but mention the disaster at Colney Hatch Asylum and others in Europe and America to illustrate the danger to which these institutions are exposed, and the need for efficient fire-fighting appliances and drill.

Civil Ambulance and Transport Corps of Sydney.

The report presented at the annual meeting of the Civil Ambulance and Transport Corps of the St. John Ambulance Brigade held last month gives details of the excellent work accomplished by this organisation during the eight months ending September 30th. During that time 1605 cases were attended to, the distance travelled being 6207½ miles. The number of cases conveyed to hospitals was 1100. The corps also removed 124 cases to homes, trains, or boats. Since the inception of the Civil Ambulance and Transport Brigade 14,774 persons have received the benefit of its services. Accidents to seamen and wharf labourers totalled 147 ; in factories and from buildings, 114 ; and in the streets, 280. Since the amalgamation, the headquarters, Newtown, and Balmain ladies' companies have formed themselves into nursing divisions, and have been of great assistance to the corps. Notwithstanding every effort to minimise expenditure, the accounts for the eight months showed a deficiency of £114 6s 2d. The subscriptions are not sufficient to enable the corps to do the work which it was prepared to undertake. This institution has become so necessary a part of the medical organisation that we wonder how we got on without it. We hope that it will receive large financial support, especially as it is so well organised and controlled by an efficient committee of medical men and laymen.

Leprosy in New South Wales.

The annual report of the Board of Health on leprosy in New South Wales has just been published. It states that on the 1st of January, 1903, there were 10 patients in the lazaret. During the year 15 persons were reported as being suspected lepers, of whom 10 were ultimately admitted to the lazaret under warrants issued by the Board, after careful inquiry into each case. Three patients died during the year ; the number remaining in the lazaret on the 31st of December was 17 persons ; 9 were whites, of whom 4 were natives of New South Wales of European descent, one a native of Fiji, of European descent, two were natives of England, one of Ireland, and one of the United States of America. Of the coloured lepers, one was a Javanese, five were Chinese, one a native of the New Hebrides, and one a native of Zanzibar. The average annual number of patients resident during the year was 14·6, and the average annual expenditure per inmate was £112 1s. Dr. Ashburton Thompson contributes very fully clinical and ætiological notes on the patients admitted during the year. He also reports in full the discussion which took place in Parliament on a bill to amend the Public Health Act, 1902, the object of which was to make it illegal to segregate any leper elsewhere than in the public lazaret. Fortunately this bill was thrown out in the Legislative Council on the motion of Sir Normand MacLaurin. Dr. Ashburton Thompson also records the result of a visit of inspection of the kanakas on the Tweed River, carried out at the suggestion of the Board, that an attempt should be made at inspection of the kanakas resident there in consequence of four cases of leprosy having been detected in the Tweed River district since the beginning of 1901. Dr. Frank Tidswell, the microbiologist to the Board of Health, contributes some interesting histopathological notes on two cases which had proved fatal during the year. These notes are accompanied by some good illustrations of the facial appearances of these patients at different periods of the disease. Attached to the report is a paper entitled "Epidemiology of Leprosy: A Plea for Accuracy," contributed by Dr. Ashburton Thompson to the "Proceedings of the International Congress of Dermatology, Berlin, 1904," which has been already published in the columns of the *Australasian Medical Gazette.*

The Syme Research Fund.

As we announced last month, Mr. David Syme, of Melbourne, has given the sum of £3000 to found a prize for the encouragement of original research, especially in matters essentially Australasian. The Council of the University of Melbourne have now adopted the regulations for awarding the prize, which is to consist of £100 and a medal, open to competition in March, 1906, and similarly in each subsequent year. It will be open to any person resident in Australia for not less than five years, except that no professor in any Australian University and no head of a scientific department under any Australian Government shall be eligible. If a thesis submitted as the joint work of two or more authors be awarded the prize, it shall be equally divided between such authors. An unsuccessful candidate in one year shall be debarred from competing in a subsequent year. The prize shall be awarded to the candidate who, in the opinion of the examiners, shall submit the best thesis based upon original work in one or other of the following branches of science:—Biology, chemistry, geology or natural philosophy. Other things being equal, preference shall be given to original research connected with the material and industrial development of Australia.

The A.N.A. in its True Light.

As most of our readers are aware, the New South Wales and Queensland Branches of the British Medical Association have refused to recognise the Australian Natives' Association as a legitimate friendly society, and have refused to enter into any contract for medical attendance on its members on the ground that the A.N.A. was primarly a political organisation and the medical benefits were tacked on to make it "go." The A.N.A. has resented this attitude on the part of the medical profession in these States, and has considered itself as misrepresented and as hardly used. According to a report in the *Mildura Cultivator*, Mr. Callaghan, the president of the board of directors of the A.N.A. in Victoria, recently visited Mildura, on the occasion of the half-yearly meeting of the A.N.A. in that town, and was entertained at a complimentary smoke social. In response to the toast of "The health of the A.N.A. Board of Directors, coupled with the name of Mr. Callaghan," that gentleman took occasion in the course of his speech to dwell at some length upon the special objects and virtues of the Australian Natives' Association. He declared that "the A.N.A. was generally acknowledged to be a power for good in the community, and its reputation was gained by work done in dealing with broad political questions. If it had only been started to supply an extra society under the Friendly Societies Act then, he was free to confess, its formation could not have been justified, as there were already sufficient good lodges in existence to admirably carry out those purposes. But the organisers had felt that there ought to be an association of a national character, particularly as there was a fear at the time that the Australian native was going to turn out a man of light character with little relish for work, and but slight disposition for the study of earnest political questions. The A.N.A. was formed to encourage consideration of these things, and its success in that direction had been so marked as to win approval from those who at first were adverse critics." This utterance from the mouth of the president shows up the A.N.A. in its true light, and completely justifies the attitude of the British Medical Association Branches in some, at any rate, of the Australian States. We hope that the profession in the other States will adopt the same attitude.

The Protection of Child Life in Queensland.

In another column we publish a full account of the interview between a deputation from the Queensland Branch of the British Medical Association and the Minister for Agriculture upon the question of the milk delivery in Brisbane, and it is pleasing to note that the representations of the profession on this important matter of infant life protection were well received by that gentleman. In other directions, too, the question of the protection of child life is receiving careful attention, and we learn from the *Brisbane Courier* that the Home Secretary has taken into consideration the discoveries of Mr. Woodcraft in connection with the provision made for children, and Dr. Ham, the Commissioner for Public Health, is to be entrusted with the administration of the infant life protection clauses of the Health Act. The co-operation of the municipal councils with the Health Commissioner should do much to lessen the present high rate of infantile mortality.

BRITISH MEDICAL ASSOCIATION NEWS.

PROCEEDINGS OF AUSTRALASIAN BRANCHES.

New South Wales.

THE usual monthly meeting of this Branch was held at the Royal Society's Room on November 25th at 8 p.m. Present: Dr Scot Skirving in the chair, and about 40 members.

The minutes of the last meeting were read and confirmed.

The CHAIRMAN announced the election of Dr. Lethbridge, of the Royal Prince Alfred Hospital, and the nomination of Drs. Albert Bobardt, staff surgeon of H.M.S. "Wallaroo," and J. C. Kuipers, of Hillston.

Dr. W. H. READ exhibited a patient suffering from Friedreich's ataxia. C.J., male, *æt.* 19. First seen two years ago, when he complained of "walking like a drunken man." Mother married twice; seven children by first husband; one boy had some paralysis of one arm all his life and took fits. By second husband, one child (the patient). Mother alive and well. Father died of aneurism. No history of any nervous affection other than noted above in any of the relatives. No specific history in parents. Patient was perfectly healthy up till ten years of age, when he had a fall and fractured his arm. Shaking in legs then commenced, followed by shaking in arms. The ataxy was gradual in onset and has since then got gradually worse. He sometimes feels as if he were falling into a hollow. Gait is particularly unsteady first thing after getting up in the morning. On examination countenance distinctly stolid and dull, but he is apparently not wanting in intelligence. He has a definite ataxy of the lower limbs; the gait is staggering and uncertain like that of a drunken man. The feet are not lifted so high, nor does he stamp with his heels so characteristically as does a tabetic. He has difficulty in executing delicate voluntary movements of the upper limbs. There is considerable unsteadiness of the head, which looks as if it were too heavy for the body. Defective co-ordination is shown in the way he staggers when standing with feet together and eyes closed. No rigidity of limbs. No sensory symptoms other than occasional pins and needles in legs. No trophic changes. No visceral crises. No lightning pains. No interference with organic reflexes. No ocular paralysis or optic nerve atrophy. Pupils react normally to light and accommodation. Knee jerks absent. Plantar reflex diminished. A coarse, irregular nystagmus present only on lateral movements of eyeballs. Speech is distinctly slow, spaced and thick. There is well marked scoliosis of spine and definite pes cavus. The whole foot is shortened from before backwards; there is hyper-extension at the metatarso-phalangeal joints and flexion at the inter-phalangeal joints of all the toes. The arch of the foot is exaggerated. There is no mavus cava.

Dr. A. S. VALLACK (Bowral) read a paper on "Some Problems in Asepsis." (See page 609.)

Dr. H. C. HINDER read a paper on "The Results of Five Months' Surgical Work at the Royal Prince Alfred Hospital." (See page 614.)

Dr. HINDER did not approve of the use of rubber gloves, for apart from the loss of sense of touch involved in their use, he had frequently found on filling gloves, which had been used the day before, with sterilised water, that there were pinhole perforations. Others had noticed the same defects, and if one used these imperfect gloves, it was only contaminating the wound with dirty hands. In case of dressing a septic wound, the surgeon could avoid contaminating his hand by using forceps. He thought it possible to practically sterilise the hands, and quoted a case in which he had operated for strangulated hernia, which healed up perfectly, although three hours previously he had operated on a septic case. He sterilised his hands with potassium permanganate and oxalic acid.

Dr. STEWART MCKAY said that the sterilisation of the hands was possible if the surgeon did not handle septic wounds. Mr. Tait and Mr. Bantcock never used antiseptics, but by avoiding contamination of their hands with septic material they were able to get excellent results. If, however, the surgeon did touch a septic case, was it possible to sterilise the hands? In some cases apparently this was not possible, and it was much safer for the surgeon to avoid operating for at least three days after touching a septic case. As regards the use of rubber gloves, he thought one could operate well with them, but they were most useful for the assistant whose hands might not be efficiently cleansed. He thought the method of sterilising catgut with biniodide of mercury a thoroughly efficient one. He would suggest to Dr. Vallack the use of oil of juniper instead of turpentine.

Dr. STEER BOWKER said that in his very poetical introduction Dr. Vallack spoke of nine portals of ingress for bacteria, he thought he left out one very important one, viz., the breath of the operator and his assistant. Flügge, of Breslau, says that if one breathes on to a glass and the condensed drops are collected and examined that each drop will be found to contain 4,375 bacteria, and Andrews, lecturer on pathology at St. Bartholomew's Hospital, says that saliva contains more bacteria than the worst sewage. However, he thought the personal factor had a great deal to do with successful operating — personal cleanliness. Some persons were naturally cleaner and more healthy than others, but no doubt the care of the mouth and teeth of both operator and patient was most important. His friend, Dr. Faithfull, used to tell of a man on a station belonging to his brother, who could "spay" cattle better than anyone, but his mortality was so high that they would not allow him to operate, also if he salted beef it would "go bad," and this man seemingly was perfectly healthy. Dr. Vallack said that it was impossible to render the hands perfectly sterile. Probably it was, but they could render them sufficiently so for all practical purposes. The speaker had found Weir's nascent chlorine, which he had been using for some years, the best, prepared in the manner recommended by R. T. Morris, of New York. Some chloride of lime is taken into the hand and a little carbonate of soda added; this is moistened into a paste, and is thoroughly worked into the hands and under the nails; a chemical decomposition taking place and free chlorine being given off. (This method was advocated at the discussion on asepsis at the late British Medical Association meeting at Oxford by Rodman.) He did his hands afterwards with the permanganate oxalic acid, but simply as a deoderant to remove the very clinging smell of the chlorine. Professor Harrington, of Harvard, after experimenting with all the generally used antiseptics, 22 in number, came to the same conclusion as Mr. Andrews, that they all took from ten minutes to quarter of an hour to destroy the ordinary bacteria, and that permanganate was the most ineffectual of them all; that it simply oxidised organic matter, which it kept on doing for 22 washings, and it was not until after the twenty-fifth that the colouring of the permanganate became a little fainter; but on washing the hands in soap and water the oxidising process again started, as shown by the deep colourisation. He found that hydrg. bichlor. was the most effectual, and endeavoured to get a mixture which would not be too strong for the hands, and which would destroy bacteria in seconds instead of minutes. He added hydrochloric acid to the perchloride and got a mixture which would kill the staphylococcus pyogenes aureus in ten seconds, but this mixture was too strong for the hands. He gradually weakened this until he got a mixture which he called his "ninth" mixture, which would kill any pyogenic bacteria in 30 seconds. This has been tried by Monks, surgeon to the Boston City Hospital, and is spoken very highly of by him. It is made as follows: Commercial alcohol (94 per cent.), 640 c. centimetres; hydrochloric acid (strong), 60 c.c.; water, 300 c.c.; hydrg. perchloride 0·8 grammes; or 60 per cent. alcohol, 6 per cent. hydrochloric acid and 1 in 1250 hydrg. perch. He remarks on the curious fact that these antiseptics are more effectual in this combination and strength than much stronger solutions of the same drugs used separately. The speaker had tried various methods of preparing gut — Cladius' method, etc.— but had found that he could depend on Arnold's No. 0 gut in juniper oil. He boiled his own gut and stored it in that fluid and was well pleased with it. For buried sutures he used either Arnold's No. 2 chromic or Dr. Lewis' (of Auckland) chromicised wallaby tendon, a supply of which was procured for him by Professor Watson, and which is thoroughly reliable. With regard to bacteria in sweat, sweat certainly cannot be so very poisonous or more wounds would be poisoned than are (but that was where the personal factor came in). Harrington says that he tested the prepared hands and arms of six assistants, causing them to sweat into sterile tubes; he then examined the sweat and in every instance found it sterile. He then injected some into the peritoneum of animals without any reaction.

Dr. **Maitland** thought that Dr. Vallack's paper was brimful of interest, and there were many points in it that might be discussed. First, with regard to catgut, he believed that ordinary catgut could in most instances be rendered aseptic by antiseptic methods, such as Lockwood's; but Dr. Vallack told them, and they know also from almost every writer on the subject, that spores may not be destroyed. Therefore, any method which was absolutely certain to destroy bacteria and spores was to be preferred, provided the catgut was still efficient as a ligature. The speaker had been accustomed to prepare his own catgut by boiling it in alcohol and then storing it in 1 in 250 spirituous biniodide solution. He regarded Dr. Vallack's method as preferable. He had used his gut extensively, and could say that it possesses all the advantages claimed for it. With regard to wounds which were infected with a high degree of virulence, he was convinced that the infection came in most instances from the surgeon's hands, or possibly from a wound in the operation field. This latter can to some extent be obviated if the infecting wound be curetted, pure carbolic and absolute alcohol be applied, and the operation wound treated by the open method. As to infection by the *surgeon's hands*, he agreed, with Dr. Vallack, and if his paper had consisted of one statement, "don't touch pus," and every surgeon had grasped it and acted upon it, then he was sure that infection of high virulence would cease to exist. He could call to mind one instance which he was not likely to forget, which clinically proved to him the impossibility of rendering the hands sterile. He had operated one morning on a strangulated hernia; it healed by first intention. In the afternoon he did an empyema, which was due to a perforating subphrenic abscess. His hands after this operation were treated in the most careful manner by energetic washing and scrubbing in hot water, pot. permang. oxalic acid, spirituous biniodide and aqueous biniodide. The following afternoon his hands were prepared in the same careful manner, and he operated on four clean cases, all of which were infected, two of them virulently. All the nurses and assistants wore gloves, so that his hands must have been the infecting agent, even although more than the usual care had been taken to thoroughly disinfect them. Since that time he had not operated on a septic case without either wearing gloves, or, if he had touched pus, he had used gloves when he operated on the next case. Since he had followed out this custom, beyond getting a little suppuration around a stitch, he had not had any wound infection at the Sydney Hospital in clean cases. Now, as to the use of gloves he had followed a plan similar to that Dr. Vallack had suggested. The assistants and nurses wear them—not always, because they easily perforate, and the supply runs short; but he always insisted on his house surgeon, who was handling all sorts of cases, wearing them. A glove which is perforated was worse than no glove at all. He wore gloves if he had a septic case to do, to prevent his hands from carrying infection to another case. But he did not usually wear them himself, because they materially take away the touch sense and interfere with one's dexterity. Another objection he had to gloves was that they lengthen the time of operation, and he held that rapidity of operating was no small factor in preventing infection.

Dr. **Leahy** had had some experience in the various methods of sterilisation of catgut, and he was disposed to agree with Drs. McKay and Hinder that the biniodide of mercury method was most satisfactory. As regards the use of rubber gloves, the hands perspired much in them, and if they were defective, as Dr. Hinder had pointed out, there would be much danger of infecting the wound. Silkworm gut could not be sterilised, but it was very rare to get wound infection from the use of that material.

Dr. **Corlette**, after experimenting for some time, had come to practically the same conclusion as Dr. Vallack as to the best way of treating catgut. He had tried creosote, but that was expensive and the smell was very penetrating. Oil of camphor after being purified by distillation could be used several times with safety and efficiency. An important point was that the gut must be dried slowly; if this is done too quickly it is spoilt. Gut is weakened much by heat, but even the raw gut varies much in strength.

Dr. **Gordon Craig** was much interested in both of the papers, and agreed that the biniodide of mercury method was the best for sterilisation of catgut. He thought, however, that sterilised catgut often became contaminated by passing through other hands than the surgeon's before being introduced into the body. No one but the surgeon himself should handle the catgut.

Dr. **Worrall** said he would like to call attention to an instrument steriliser which he showed, made for him by Hannam & Co., in which the cover formed one instrument tray and a false bottom another, large enough to contain all the instruments necessary for any operation. The steriliser itself could be kept on the boil during the operation, so that if an instrument were to drop on the floor it could be re-sterilised. The trays were provided with handles, so that they could be filled with water and boiled. Thus with this apparatus not alone were the instruments sterilised, but also the trays and the water in which the instruments were placed. The sterilisation of bowls and trays as thoroughly as the instruments had long been neglected. He had suggested an apparatus for this purpose in the Sydney Hospital and "Carisbrooke" private hospital several years ago, and the exhibited apparatus met the difficulty for operations in private houses. Dr. Worrall congratulated Dr. Vallack upon giving the meeting so excellent a summary of the present state of their knowledge of this important subject. He had focussed attention upon one point which he (the speaker) considered to be of the greatest importance. He referred to abstinence from contact with septic material. Some of the speakers had made light of the necessity for this, but he (the speaker) felt sure that in a large series of cases such an attitude would bring disaster. He had used Dr. Vallack's catgut in four cases (buried sutures) with entirely satisfactory results.

Dr. CRAGO said that at the private hospital with which he was connected ("The Terraces") they had had a large experience with catgut, as they used it almost exclusively both for ligatures and sutures. The method of peparation was, after rolling the raw gut on glass reels, to soak it in ether to remove as much of the fat as possible, then to boil it for 20 minutes or half an hour in absolute alcohol in a copper cylinder. It was then kept in a spirit biniodide solution. Occasionally a reel would prove brittle, but they seldom had occasion to complain of any septic trouble following its use. They had tried merely soaking it in ether, and then placing it into a spirit biniodide solution for at least a week before using, but the results had not been so satisfactory. Harrington—*Annals of Surgery* for October (in the article already largely quoted by Dr. Bowker)—had shown that permanganate of potash and oxalic acid failed to render the hands sterile. The chloride of lime method, followed by Dr. Bowker, was shown by an article in the *Annals of Surgery* a few years ago (vol. 30, page 496) to be the least satisfactory of the recognised methods, as the colonies in sterilised gelatine, after stirring with a finger so prepared, were too numerous to be counted. Although it might be impossible to completely sterilise the hands, the speaker was satisfied that, provided they be kept out of pus they could be rendered sufficiently clean not to interfere with the primary healing of wounds, even in very prolonged abdominal operations.

Dr. VALLACK, in reply, thanked the members for their kind reception of his paper. He still maintained that it was impossible to *sterilise* the hands. If alcohol is used for that purpose it simply hardens the surface epithelium, but after contact with a wound this separates off, and the softened deeper layers of epithelium are brought directly into contact with the wound. He always used rubber gloves if operating on a suppurating case, and he had not touched pus with his bare hands for 18 months, as he had found by experience that it was quite impossible to sterilise sweat gland, hair follicles, etc., and the hands could not therefore be aseptic. He reiterated his views on the use of turpentine as the best means of sterilising catgut. He agreed with Dr. Craig that it was most important that after sterilisation no one but the surgeon should handle the catgut.

COUNCIL MEETINGS.

The Council met at the Association rooms on Friday, November 11th. Present: Drs. Beeston, Dick, Rennie, Crago, Brady, Newmarch, Hankins, Hinder, Worrall, Maitland, Pockley and Abbott.

The minutes of the previous meeting were read and confirmed.

Dr. Lethbridge, of Royal Prince Alfred Hospital, was elected a member of the Branch.

Letters were received from the Lewisham and North Shore Hospital with reference to country patients.

Letter was read from the President of the Board of Health, stating that a draft bill had been submitted to the Government with reference to the notification of tuberculosis.

Letter was read from Dr Harris, of Armidale, with regard to Dr Clune's letter in the Armidale *Chronicle*.—Letter of the hon. secretary was approved.

Letter from Dr. Joseph Park, of Corrimal, calling attention to an article appearing in the Illawarra *Mercury*. Resolved—That the medical men of the district be written to for an explanation.

Letter was read from the Secretary of the Pharmacy Board with reference to the new Poisons Act. Resolved—That the matter be left in the hands of the Editor of the *A. M. Gazette*.

The Hon. Secretary reported that he had had a conference with the officers of the M.U.I.O.O.F. on the question of fees, etc.

Dr DICK proposed—"That the Council approve of the general principles of the scheme for the establishment of the Medical Practitioners' Widows and Orphans' Fund, and that Drs Crago, Hankins and Dick be a sub-committee to deal with the matter and report to the next meeting." Carried.

The question of ethics submitted by Dr Worrall was then considered. After considerable discussion it was resolved—"That the Council after consideration decline to express an opinion in the matter."

The Council met at the Association Rooms on Friday, December 9th, 1904. Present: Dr. Rennie (in the chair), Drs. Newmarch, Hankins, Jarvie Hood, Crago, Pockley, Worrall, Maitland, Abbott, Dick.

The minutes of the previous meeting were read and confirmed.

The following members were elected:—Dr. Kuipers, Hillston; Dr. Bobardt, H.M.S. "Wallaroo."

Letter from Dr. Harris, of Armidale, was read and received.

Letter from Dr. King, of Nowra, offering certain bound copies of the *Lancet* and *British Medical Journal*. Resolved—"That the offer be accepted and Dr. King thanked for his gift.

Letter from the Public Morals Association with reference to indecent advertisements appearing in the daily press. Resolved—"That the Council co-operate with the Association in this matter."

The Hon. Secretary reported that Dr. Bobardt, of H.M.S. "Wallaroo," had called upon him with reference to the appointment of medical officers to a Red Cross ship.

The Medical Practitioners' Widows and Orphan Fund. Resolved—"That the matter be referred to the next general meeting."

The question cf a congress of the Branches of the British Medical Association was left in Dr. Rennie's hands to deal with.

Insurance of Library. Resolved—"That a policy for £300 be taken out."

Queensland.

The annual meeting of the Branch was held at the School of Arts Hall on Friday, December 2nd, 1904. Dr. W. S. Byrne (president) was in the chair, and there was an attendance of 22 members.

Dr. L'Estrange exhibited a case in which the stapes could be seen in the oval window.

Dr. Edith Ure exhibited a case of spina bifida.

Dr. Little exhibited a specimen of multiple fibroid removed from a patient in whose case there had been a remarkable absence of symptoms.

The minutes of two general and a special meeting were read and confirmed.

Correspondence with reference to the "Pharmacopœia" was referred to the Council for report.

The President reported upon the deputation to the Minister for Agriculture with reference to the proposed interruption of the regular supply of milk.

Drs. Gervase Penny, Tarleton, and Alex. Marks were elected members of the Branch.

The report of Council and treasurer's statement for 1904 were read and adopted.

REPORT OF COUNCIL FOR 1904.

Your Council have much pleasure in presenting their report of the year's work. Twenty new members have been elected during the year. Drs. Bowkett and Ure have died, and three members have resigned, making a total of 130 members, an increase of 14. The School of Arts Hall, in which the meetings have been held, continues to give satisfaction; but your Council feel that better arrangements might be made for housing the library and museum, a question which will be dealt with at an early opportunity. The hon. treasurer's statement shows a credit balance of £114 12s 5d, being £23 4s more than at the end of 1903. The estimated credit balance is a little less, namely, £109 5s 5d—a very satisfactory amount in consideration of the reduction of the subscription for town members from £3 3s to £2 12s 6d.

There has been an average attendance of nearly 17 at the monthly meetings, an improvement on the numbers of 1903; but your Council wish that the record of the March meeting—27—might have been maintained throughout the year.

The more important business of the meetings has been as follows:—

February.—"Infant Mortality and Infant Feeding." The President.

March.—"The Notification of Phthisis." Dr. Turner.

April.—"Cause of Lead Poisoning in Queensland Children." Dr. J. Lockhart Gibson.

May.—"Right Central Hemianopsia with Word Blindness." Dr. J. Lockhart Gibson. "Modes of Infection." Dr. Halford.

June.—"Notes on Midwifery." Dr. Cameron.

July.—"Early Operation in Typhoid Perforation." Dr. Turner.

August.—"Reminiscences of the Panic Times of Plague." Dr. Wield.

September.—"Successful Cæsarean Section." Dr. Pulleine. "Successful Cæsarean Section." Dr. Alfred Sutton. "Some Interesting Midwifery Cases." Dr. Carvosso.

October.—"Suggestions as to the Pathology of Acute Anterior Poliomyelitis."—Dr. Falkner. "The Prevention of Post-operative Intestinal Paresis by Subcutaneous Injection of Atropine and Eserine." The President.

November.—"Discussion on Eclampsia."—Opened by Dr. Alfred Sutton. "Notes of a Case of Perforating Ulcer of Stomach." Dr. Clatworthy.

A successful meeting was held at Toowoomba in October, the visiting members being welcomed and generously entertained.

The relationship of the Branch and the A.N.A. was brought forward again during the year, with the result that the A.N.A. has been placed upon the same footing as the B.A.F.S. Med. Inst., and your Council desire to express their appreciation of the loyalty of those members who have resigned positions with the A.N.A. The efforts of the Council to prevent good men from accepting office under these societies have been successful.

The collection of specimens in the Museum continues to grow in number and interest, and the curators, Dr. O'Brien, who resigned in consequence of his leaving Brisbane, and Dr. Baxter-Tyrie, who succeeded him, are to be congratulated upon the additions made during the year.

Important resolutions were passed by the Branch with regard to professional advertising, which should be of value to practitioners.

A deputation waited upon the Commissioner of Public Health upon the question of the compulsory notification of phthisis, and your Council are pleased to know that their efforts in this direction have been attended with success. Success is also anticipated by them in reference to their efforts, by deputation to the Minister for Agriculture, to prevent legislation in the direction of an interruption in the regular supply of milk, by a clause in the Dairy Produce Act that milk should not be delivered or sold after 1 p.m. on Sunday.

Your thanks are due to the editor of the *A.M.G.* for publication of reports of meetings and of papers read thereat; to Mr. Nelson for attention to your comfort in the School of Arts Hall; and to those members who have helped in the success of the year's work by reading papers, exhibiting cases, supplying specimens for the Museum, and in taking part in the two above-mentioned deputations.

There have been 14 Council meetings during the year, with the following record of attendance:—Dr. Byrne, 14; Dr. Hopkins, 6; Dr. Robertson, 7; Dr. Turner, 9; Dr. O'Brien, 5; Dr. Baxter Tyrie, 3; Dr. Wield, 14; Dr. Cameron, 9; Dr. Carvosso, 8; Dr. Halford, 11; Dr. Brockway, 14.

Your Council trust that the Branch may continue to prosper, and that the coming year may be as successful as that which is brought to close to-night

Signed on behalf of the Council.

William S. Byrne, President.
Archibald B. Brockway, Hon. Sec.

Dr. Byrne read his presidential address. (See page 607.)

The scrutineers, Drs. R. Thompson and Page, having handed in the result of the ballot, the following were declared to be elected to the various offices for 1905:—President, Dr. W. N. Robertson; vice-president, Dr. A. J. Turner; *ex officio*, Dr. W. S. Byrne; hon. treas., Dr. A. B. Carvosso; hon. curator, Dr. Baxter-Tyrie; hon. auditors, Dr. Culpin and Dr. Millais Culpin. Council: Dr. A. C. F. Halford, Dr. Espie Dods, Dr. J. Little, Dr J. Cameron; hon. sec., Dr. D. Wield.

Dr. Robertson then took the chair, and thanked the members for the honour conferred upon him, referring in eulogistic terms to the ex-president, Dr. W. S. Byrne.

Victoria.

The monthly meeting of the Victorian Branch of the B.M.A. was held at their rooms in Collins-street on November 10th.

Dr. Weigall (president) was in the chair, and the following members were present:—Beckett, Bryant, Cuscaden, Fox, Joske, Fulham, Steel, Vance.

Dr. Weigall read notes on a case of wound of the ureter—spontaneous recovery.

Dr. Fox enquired if there was any sign of hydro-nephrosis, and how did the urine come through the vagina?

Dr. Cuscaden thought it would be very interesting to see if the urine was passing into the bladder through the injured ureter. He thought the explanation given by Dr. Weigall was most probable, and he thought it was very desirable that accidents of this sort should be reported, as they often occurred even in the hands of the most eminent surgeons.

Dr. Vance read notes on a case of acute colitis, followed by empyema.

Dr. Weigall related three cases of epidemic colitis in children in the same family, two of which recovered, but the third, a fine healthy boy of 1½ years, had obstinate hæmorrhage and high temperature. After a great deal of anxiety this child appeared to be convalescing, when he suddenly developed a patch of pneumonia and then acute nephritis, and becoming uræmic he died. He had found acetozone the most beneficial of all treatment for the bowel complaint, but where septic poisoning occurred in such cases he did not find any drug had much effect.

Dr. Joske considered in such cases that the bacilli coli communis and the pneumococci were always disseminated through the blood.

Dr. W. R. Fox exhibited a number of surgical electric lamps of great interest. The first one could be used as an ordinary hand lamp for general illuminating purposes, and gave a brilliant light; it was also fitted with appliances to enable it to be used for the examination of the ear, the nose, the urethra, or the rectum. The transillumination of a hydrocele by means of this lamp is so efficient that large print can be read by the transmitted light. The lamp is a cool one, only getting warm when used for some little time. A closely fitting lens may be used with it, and this serves both to concentrate the light and to prevent the lamp, even if only warm, being brought into direct contact with the patient. The next was a tongue depressor, which carried a small electric lamp, about the size of a pea, near its end. As this lamp is in the mouth when the depressor is in use, the mouth and fauces are brilliantly illuminated. This lamp also remains quite cool enough to render burning the patient by accidental contact an impossibility. For use with children where such contact is sometimes quite unpreventable, another tongue depressor was shown, in which the light is projected through a solid glass rod, the lamp being outside the mouth. This remains perfectly cold, no matter how long the lamp may be burnt. A laryngoscope was then shown which carried a mignon lamp, close to the reflecting laryngeal mirror, thus obviating the necessity for the frontal mirror as used with the ordinary form of instrument. A lamp with adapter for fitting inside an ordinary Ferguson's speculum was then exhibited. This provides a perfect light inside the speculum for vaginal examinations, and it occupies so little space that it in no way interferes with the ordinary uses of this instrument. The next lamp shown was one which was provided with a water circulation, being kept by this means absolutely cold. It could be used for transillumination of the antrum or of a hydrocele, or for any general illumination. A minute lamp about the size of a grain of wheat was then exhibited. This was provided with a similar water-cooling circulation, and was intended for the illumination of the globe of the eye. It is inserted under the eyelid, and sufficient light penetrates the eyeball to illuminate the posterior chamber. It was said to be very useful in some conditions for ophthalmoscopic examination.

South Australia.

The monthly meeting was held at the University of Adelaide at 8 p.m. on Thursday, October 27th, 1904.

Present: Dr. C. W. Hamilton (president) and about 30 other members and one visitor.

Minutes of previous meeting read and signed.

Prof. Watson showed:—1. Eggshell-like plaques of calcification developed in the arachnoid of the spinal cord of a male, *æt.* 80, who died of senile decay. A sessile tumour like a pea is attached to one of the strands of the cauda equina. Cherry-sized dilatations of the dura-matral sheaths of the three upper sacral nerves add to the interest of the specimen. 2. Longitudinal tear (one inch long) of the œsophagus, commencing 1½ inches above the cardiac orifice of the stomach, from a jockey, *æt.* 19, who died 36 hours after a steeplechase accident. Some original contents of the stomach were found in the posterior mediastinum and in the left pleura. 3. Calcifying hydatid of the lobus caudatus, from a jaundiced man, *æt.* 56, with cholangitis and cholecystitis. The common duct and portal vein are pasted on to the leather-like capsule of the cyst. I showed a specimen last year where, in a similar condition, the ductus choledochus had suddenly given way. Twice during the past six weeks, where the cholangitis had gone on to suppuration, a bogus history of appendicitis and dysentery respectively misled some of us into a diagnosis of portal pyæmia. 4. Portion of abdominal wall from an extremely obese woman, *æt.* 40, who had albumen in her urine and intertrigo in the fold of Venus from overlapping of an immense umbilical hernia, in which there were two sacs and 22 saccules containing altered omentum and lipomatous developments from Richet's canal. The cæcum having first been liberated from the other herniated contents, the latter (omentum and lipoceles) were then cut away *en masse*. The aponeuroses were lashed with silver wire, and the thick layer of superjacent blubber drained for a few days with a rubber tube placed in the transverse wound, as recommended by the late Dr. Pinnock, of Ballarat.—*Dr. Cudmore.* 5. Papillomata of ovaries removed with the corpus uteri from a spinster, *æt.* 31. During a subsequent operation for hernia the following year the previously sloppy peritoneal cavity was found dry, and the rough implantation areas of its walls again smooth.—*Dr. J. A. G. Hamilton.* 6. Glioma of splenium spreading into right occipital lobe, from a demented woman, *æt.* 37, who passed everything involuntarily, and died in coma.—*Dr. Rogers.* 7. Pelvis from a man, *æt.* 73, who suffered from prostatic obstruction. The chief enlargement being in front of the prostatic urethra, the urethral orifice has therefore been pushed back on the ureteral orifices, so that it would have been impossible to perform Freyer's method without ploughing up the trigonum and injuring the ureters. A saccule of the mucosa, the size of a walnut, communicating with the bladder-cavity by an opening the size of a threepenny piece in the muscular coat, has pushed out to the pelvic wall and impinged on the obturator nerve. 8. Pelvic viscera from a man, *æt.* 76, who died from prostatic obstruction. The bladder is dilated rather than hypertrophied. The prostate is not very much enlarged, but it is hard and fibrous, and could only have been removed by the perineal route. The ureters and renal pelves are dilated. 9. Left lobe of prostate removed suprapubically from a man, *æt.* 70. In this case the right half of the prostate was fibrous, and its removal was found to be impracticable. The obstruction, fortunately, was due to the growth in the left lobe alone.—*Dr. R. Stirling* (Melbourne). 10. Tuberculous testicles removed from a policeman of fine physique, *æt.* 32, who developed phthisis 18 months ago and orchitis six months later. The lung trouble is clearing up and the body weight is increasing. As complementary to the orchectomy, the board-like vesiculæ seminales were incised from the perineum and for a time stuffed with iodoform gauze.—*Drs. Swift and Giles.*

Exhibits were also shown by Drs Hayward, Mainwaring and others, and some new bladder instruments by Dr. Newland.

The discussion on Dr. Wilson's case of "Eclampsia" (see p. 624) was continued by Drs. Swift, Hayward, Brummitt and Evans.

Dr. **Wilson**, in reply, said: Eclampsia is always a subject which permits of a great deal of discussion owing to its unsettled ætiology and, until recently, indefinite pathology. In regard to the theories of its causation, it is hardly necessary to mention the older mechanical theories—pressure on the ureters, etc.—as the condition is generally regarded now as a toxæmia, but what the exact toxin is does not seem at all certain. Dr. Lendon mentioned some of the facts favouring the placental origin of the toxin—the so-called syncholysm. The great number of toxins suggested pretty clearly indicates the unsettled state of opinion on this point. Amongst such bodies we may mention ptomaines, leucomaines, peptones, creatin ammonium carbonate, globulins and acetones. Urea, too, has long been considered the offending substance. but the fact that there is a decrease of urea in the urine of eclamptics is now generally regarded as merely an indication of imperfect proteid metabolism. Nor can it be regarded as certain where the toxin is formed, and we have the following suggested sources—kidneys, liver, intestines, placenta, thyroid, certain micro-organisms, and the fœtus itself. We may take it as proven that the fœtal death does not always cause cessation of the fits, as was originally suggested. The only one of these I propose to mention is the thyroid. Nicholson claims that eclampsia is due to an insufficiency of iodothyrin (an acute principle of the thyroid which aids the metabolism of nitrogenous substances). In eclampsia, metabolism stops short of the formation of urea, and hence the condition of toxæmia. This also explains the deficiency of urea in the urine, which is recognised as one of the surest indications of impending eclampsia. The thyroid gland is enlarged in normal pregnancy, while this enlargement is absent in eclamptics. Lange examined 133 women in the last 12 weeks of pregnancy and found the thyroid hypertrophied in 108, and of these only two had albuminuria—in both the result of a chronic nephritis present before pregnancy. Of the remaining 22 in whom the thyroid was not enlarged, 20 had albuminuria. As a result of this and other clinical and experimental evidence, Nicholson suggested the use of thyroid extract in eclampsia. As a prophylactic he gives small doses frequently repeated, while when the fits have started he gives large doses, 40 gr. at once and 20 gr. an hour later if necessary. Thyroid extract exerts a marked diuretic action, and it acts very quickly. In another case of eclampsia which I attended since reading my paper, I gave the patient 45 gr. of thyroid extract in six hours, and delivered a seven months' child after dilating the cervix with a Frommers' dilator. In the following 48 hours the patient passed about 200 ounces of urine. This patient was quite blind for some hours before delivery, but recovered her eyesight on the third day, and at the end of three weeks her urine was normal, and fundus oculi also. Nicholson claims that thyroid extract causes a dilatation of the renal arterioles; it has, in fact, the opposite effect to adrenalin. The fact that the kidneys are not permanently damaged in many cases of eclampsia indicates that the kidney disturbance is often a functional one, and possibly this disturbance is a constriction of the renal arterioles which the thyroid extract counteracts. There is in eclampsia an increased blood pressure, with constriction of the arterioles, and practically all the methods of treatment for this condition aim at lowering the blood pressure. This applies to such vaso-dilators as pilocarpine, veratrum viride, purgatives, diaphoretics and diuretics, chloroform, chloral; also to the use of vapour baths, venesection, saline injections, etc., and also to the use of morphia when given in such doses as to relax the spasm of the renal arterioles and so favour diuresis, while also inhibiting toxin formation. Opinion is also very varied as to whether there should be any interference with labour. Dr. Lendon mentioned that such an eminent authority as Herman deprecates any interference at all. Herman seems to be in the minority in regard to this point, as in a recent review by Berkeley, out of 56 of the leading obstetrical teachers in Great Britain and Ireland who expressed an opinion, Herman was the only one who never advised interference under any circumstances. Herman bases his opinion on the fact that in 1600 cases of eclampsia which he collected the fits only ceased after delivery in 47 per cent. Duhrssen, on the other hand, claims that if the uterus be emptied during narcosis, in 93 per cent. of cases the fits cease, and it is also generally recognised that the condition is, as a rule, more amenable to treatment after delivery than before, provided no sepsis be introduced during the delivery. Dr. Jay quoted Shoganoff's statistics of 58 cases without a death, and mentioned that Shoganoff regards eclampsia as an acute infectious fever of short duration. This is certainly a remarkable series of cases, as the usual maternal mortality is generally given at 25 to 35 per cent., though Veit has recorded 60 cases treated with morphia alone with two deaths, nd Charpentière 239 cases treated with chloral with a 4 per cent. mortality. Dr. Harrold mentioned two cases of eclampsia followed by jaundice, both of whom recovered. It is generally recognised that jaundice is a very unfavourable symptom. Stürmar incidentally mentions one case that recovered. Schmore, in an analysis of 71 cases, records ten who had jaundice, all of whom died. The post-mortem condition of the liver corresponded closely to the condition found in acute yellow atrophy, and which Dr. Lendon described at our last meeting. Similar changes were found, too, in the livers of those eclamptics who had no jaundice, so that the occasional occurrence of a jaundice that clears up is not to be wondered at. The majority of obstetrical authorities nowadays seem to be in favour of interference with labour in cases of eclampsia, and certainly in the presence of such complications as increasing number and severity of the fits, rising pulse, late and rising temperature, and especially any serious interference with vision, amaurosis, etc. In regard to the use of mechanical dilators when rapid dilatation is indicated, the danger of cervical laceration should not be a bar to their use if proper care be taken. Whether the field of use for mechanical dilators will be extended to cases of normal labour does not seem to be altogether a question of the future, as in last month's *Obstetrical Journal* Seigneur has recorded a number of cases of uncomplicated labour in which he used a mechanical dilator for this purpose.

Dr. W. A. **Verco** then read a paper on "Cases of Gallstones in the Common Duct" (see p. 619), and Dr. **Cudmore** a case of "Abdominal Hydatid" (see p. 633).

The final monthly meeting of the current year was held at the University at 8 p.m. on Thursday, November 24th, 1904. The president, Dr. C. W. Hamilton, was in the chair, and there were also 27 members and two visitors present.

Dr. T. K. **Hamilton** exhibited the following:—1. *Living.* (*a*) *Divergent strabismus and anosimetropia* in a man aged 45 years, operated on by Dr. Webster Fox's method. Result perfect. (*b*) *Mixed-celled sarcoma* on the right lower eyelid in a man aged 47 years. (*c*) *Sarcoma of the giant-celled type in the maxillary antrum* of a woman aged 30 years. A partial resection of the superior maxilla performed by Drs. J. A. G. and T. K. Hamilton. Six weeks after the operation a patch of ulceration appeared on the hard palate close to the artificial opening into the antrum, which was left after the resection. Examination of the ulcerated patch proved it to be an adenoma (exhibited) and not a recurrence of the sarcoma. The patient is now wearing a dental plate fitted with teeth to replace those which had to be removed. It also closes the antrum aperture and is constructed so as to push the cheek outwards, thus filling up a most unsightly depression which the removal of the superior maxilla caused. 2. *Specimens.* (*a*) *Epithelioma removed from the larynx* after thyrotomy. (*b*) *Polypi removed from the maxillary sinus* of a man aged 42 years. The radical operation had been done to explore the sinus; the polypi were thus discovered and removed. 3. *Epithelioma removed from the upper lip* of a man aged 67 years. 4. *Epithelioma removed from the lower lip* of a young man aged 32 years. 5. *Portion of an enlarged lachrymal gland and orbital dermoid or implantation cyst* incorporated therewith. 6. An india-rubber bag-shaped tampon for the nose fitted with a central tube to allow of breathing through the nostril when the tampon is *in situ*. 7. Cast of an obturator attached to an upper dental plate, devised to prevent re-attachment of the soft palate to the posterior wall of the pharynx in cases of cicatricial contraction and re-adhesion following syphilitic tertiary ulceration.

Exhibits were also shown by Drs. Swift, Todd and Mainwaring.

Minutes of last meeting were read and confirmed.

Discussion on Dr. W. A. Verco's paper on "Gall-stones in the Common Duct" (see p. 619) was continued by Drs. Lendon and J. C. Verco.

Dr. W. A. **Verco** replied.

Dr. J. A. G. **Hamilton** then read a paper on, and exhibited specimen and microscopicai sections of, a case of "Deciduoma Malignum" (see page 616); and Drs. Mainwaring, Wilson, Lendon and J. C. Verco also discussed the subject.

Sunday Delivery of Milk in Brisbane.

A **deputation** from the Queensland Branch of the British Medical Association, consisting of Drs. W. S. Byrne (president), A. B. Brockway (secretary), A. C. F. Halford, A. B. Carvosso, D. Wield, J. H. Little, A. J. Turner, E. W. Kerr Scott, J. Thomson, W. N. Robertson, R. Thompson, G. H. Hopkins, A. Sutton, W. T. Webb, H. Clatworthy, and J. F. Nall, waited upon the Minister for Agriculture, the Hon. D. F. Denham, M.L.A., on November 24th, 1904, at the Department of Agriculture, Brisbane.

Dr. **Byrne** submitted the following resolution which had been carried unanimously by the Association:—"That any interference with the regular supply of milk to the community will assuredly increase very seriously the already high death rate amongst children," which bore the signatures of a large number of medical practitioners. He said "This resolution had been brought about by the new clause in the Dairy Bill, which he believed had passed the Lower House, which limited the supply of milk on Sundays. He believed that by that Act they were only to have one milk delivery on Sundays."

Mr. **Denham**: No delivery after one o'clock on Sundays.

Dr **Byrne**: In other words it means one delivery practically. Before going further with our opinion upon the matter it may be as well to lay some facts before you. The first is that the mortality rate of children in Queensland from gastro-enteritis heads the whole list of causes of deaths. We would like to point out that this gastro-enteritis is almost altogether a disease arising from contaminated milk, also that it is a preventable disease. If we could get absolutely pure milk, such as should come from a mother's breast and such as is provided in the laboratiories in Chelsea, in New York, and in several municipal formed laboratories for the supply of absolutely pure milk to children, this gastro-enteritis would to a great extent be stopped.

Mr. **Denham**: Would that be accomplished by pasteurising ?

Dr. **Byrne**: No.

Mr. **Denham**: How do you get this absolutely pure milk ?

Dr. **Byrne**: It is pasteurised and put up in absolutely air-tight bottles. What we would like to point out is that if the Government would take charge, or take care of the children who are already born, there would be no great need for immigration. Pure milk cannot be had here. If we had we would save the lives of a number of children who now die annually from gastro-enteritis—primarily caused by impure milk. The reasons why milk is such a poisonous substance are not alone the bacteria which arise in the milk shortly after milking, but the products of those bacteria. Batchelor and Saunders, who have made analyses of bacteria in Boston, found that about half an hour after milking there are something like 70,000 bacteria (not, of course, all harmful bacteria) in a cubic centimetre of milk. After three hours there are two and a half million bacteria, and after eight hours there are four million. So we want to impress upon you that the longer milk is kept the more poisonous it becomes.

Mr. **Denham**: They are not all unfriendly bacteria ?

Dr. **Byrne**: A great many are not. But it is not the bacteria that are necessarily poisonous. It is their products and the decomposition that goes on in milk. It is on account of the children that we are anxious, and although matters are bad enough now we feel sure that if the bill is passed in its present form, and there is only one delivery of milk on Sundays, matters will be very much worse for the children. It is impossible in summer, with a temperature varying from 95° to 100°, to keep milk any way good at all. There is another point, and that is that the cows must be milked twice on Sunday. What is going to become of the second milking ? I suppose the milkmen will not be human if they do not use it on the Monday morning.

Mr. **Denham**: The milkmen say they will separate it.

Dr. **Byrne**: We wish to point out the danger to infant and child life which this clause will produce. That is the aspect of the case that concerns our Association. The infant mortality at present is enormous from a preventable disease, and this clause will exaggerate the disease and trouble.

Mr. **Denham**: What will be the effect of boiling the milk, or scalding?

Dr. **Byrne**: You can boil milk, but to destroy the bacteria you require to boil the milk at least one and a half hours, and boiling has no effect on the products of the bacteria. It has no effect whatever on the toxins in the milk.

Dr. **Turner**: This deputation fully sympathises with what I have no doubt is the intention of the clause that milk vendors should have a half-holiday at least once a week, if it can be arranged in a harmless manner. We would be as pleased as anyone to see such a provision inserted in the bill. The Legislature, however, in their good intent, has unquestionably passed a clause which will cause very serious evils indeed, and we think the case is one worthy of reconsideration. I do not want to enter into any technical points, but I would point out that in the first place milk is an indispensable food for infants and young children. In a hot climate like Queensland's, the danger to infants and children from stale and decomposing milk is very great, and this is a point we all feel very strongly upon. The danger is very great even under present conditions. Although the infantile mortality in Queensland is certainly very high, yet, in spite of our hot climate, it was no higher, in fact it was lower, than that of New South Wales and Victoria; 1903 was an exceptional year on account of the drought and the high price of milk. Bad as things are it is possible they may be made worse, and we are certain things will be made worse if this clause is left in the bill. The reasons are several. In the first place if there is to be only one delivery it means that any mother bringing up an infant will have to give that infant on Sunday afternoon and night milk that was drawn early on Sunday morning. We are quite sure, from experience, that the danger of that infant being fed with stale, and therefore poisonous, milk would be very great. We are told the milk could be boiled. Milk should be boiled, and I believe it generally is. It is always my practice when I have been asked about an infant being fed on cow's milk to tell the mother to boil the milk. Repeated boiling, however, spoils milk, and in any event we are strongly of opinion that boiling will not get over the difficulty.

Mr. **Denham**: That is, the morning delivery will not hold sound till night.

Dr. **Turner**: Certainly not in hot weather. Again, for infants, milk is wanted during the night.

Mr. **Denham**: That is milk delivered on Sunday morning and pasteurised would not keep sweet until the Monday morning delivery?

Dr. **Turner**: No; it would not be safe to use it. It might smell all right, and it might not go sour or curdle. The danger is from milk that is apparently right and yet may be poisonous. I do not think any mother would use curdled milk for an infant in any event. If the mother had an ice chest no doubt the danger would be minimised, although not entirely removed, but there are thousands who cannot afford ice.

Dr. **Byrne**: And we do not get ice on Sundays.

Dr. **Turner**: I am not going to discuss whether it would be theoretically possible to pasteurise milk and deliver it in such a pure state that it would keep safely for 24 hours. The point is that it is not done. It has not been proved that it is practicable at a reasonable cost in a climate like ours. Until this has been shown we do not consider that infants and children should suffer from gastro-enteritis simply because it is possible that, in the future, certain things can be done safely. Another point I would like to urge is, where the double supply of milk is to come from on Sunday morning.

Mr. **Denham**: Milk vendors would milk their cattle very early on Saturday (for the afternoon delivery) and late on Sunday morning, and that would mean they would be able to get a larger supply. But really that aspect of the question does not appeal to the medical profession.

Dr. **Turner**: It might be done, but I presume there would be some difficulty. If there is difficulty there is always an easy way of getting out of it, and that is by diluting the milk. And we are afraid a certain number of infants would be fed on Sundays with watered milk.

Mr. **Denham**: Do you not always dilute it?

Dr. **Turner**: Supposing we order an infant to have milk and water in certain proportions and the milk comes in already watered, you would have a form of Sabbath observance that no one could advocate. The third point is, we presume the cows will be milked on Sunday afternoons, and although that milk may be separated, still there is a grave danger that some of that Sunday afternoon's milk will be delivered on Monday morning. That is the gravest danger of all. Milk of that sort would come in thoroughly stale, and no domestic treatment would, in the slightest degree, make it wholesome.

Mr. **Denham**: There would be no object in selling Sunday's milk on Monday. The Monday's milking would be sufficient for the Monday's delivery.

Dr. **Turner**: I think it is a possible danger. The mortality among children in the first year of life is roughly ten per cent. Nine-tenths of these deaths are due to gastro-intestinal disturbances. I think we are all agreed that the greatest cause of this enormous amount of disease is the want of freshness in milk, that is under present conditions, and we feel that any provision which enhances the difficulty is one which should be strongly deprecated. In bottle-fed children the mortality is much higher, but every child sooner or later comes to cow's milk. In all the discussions I have noticed on this clause I have never seen the interests of the young children advocated. It will affect their interests most vitally. We appear here to supply that missing element in the discussion, and I feel sure that having pointed it out it will be fairly and dispassionately considered by the Legislature. Everyone will admit that the health of young children should be most precious to the Legislature, for, after all, on them will rest the burdens of the State when our time is past.

Dr. **Little** asked for information with respect to the clause in the Dairy Bill to the effect that the water supplied to stock or used in connection with a dairy should be pure and wholesome, provided a pure and wholesome supply can be obtained at a reasonable cost.

Mr. **Denham**: Where milk is supplied for human consumption, such as in the city and suburbs, water can be obtained at a reasonable cost, and no milk vendor will be allowed to give his cattle water that is not pure and wholesome. That will be strictly enforced. But the saving clause was put in in view of the unfortunate fact that in certain districts of Queensland (for example, Rosewood) water is exceedingly scarce. Although Rosewood is one of the largest dairying districts in Queensland, yet it is very poorly supplied with water. After a protracted spell of dry weather the water available cannot be described as wholesome, and yet the cattle have to partake of it or perish. If the owners were compelled to supply wholesome water they would not be able to do it except at enormous expense. The provision is inserted to protect men who are unable at any cost to get pure water for their stock. But in all suburban areas and in towns water can be obtained at a reasonable cost, and dairymen will be compelled to obtain it. No dairyman around Brisbane will be allowed to use impure water. The Rosewood people separate their milk, and would not be allowed to vend their milk for human consumption if impure water were used.

Dr. **Halford**: With respect to the length of time one can rely on milk remaining in a wholesome state, I think that during the summer months it would not be safe to rely on such milk keeping good for a longer period than four or five hours. That is the limit of safety. After that, danger arises and toxins or germs may be consumed with milk. The magnitude of the dose is the danger. Certain decompositions may take place in the milk, although the creative agent may no longer exist, having been killed by boiling. But the boiling will not remove or in any way alter what are essentially poisonous elements in the milk. Moreover, boiling does not prevent re-infection. People may be told to boil their milk, but they are not equipped with the proper technique of sterilisation and keeping the milk, so that it may not be subsequently contaminated. The milk, after boiling, may be put into some bacteriologically unclean vessel, or flies may be allowed access to it. It is not only necessary to boil milk, but also to preserve it from possible sources of contamination, and people who think that by boiling milk they save it from subsequent contamination are entirely wrong.

Mr. **Denham**: You said, Dr. Byrne, that pure milk cannot be had in Queensland. Do you make that remark of Australia as a whole?

Dr. **Byrne**: Yes. You cannot get absolutely pure milk fit for feeding infants with. The remark applies to the whole of Australia.

Mr. **Denham**: We are in no worse position than our neighbours in the south.

Dr. **Byrne**: But it is accentuated up here on account of the hot weather.

Mr. **Denham**: Have you seen anything of the powdered milk?

Dr. **Byrne**: Desiccated milk?

Dr. **Turner**: No preserved milk is as good as fresh milk.

Mr. **Denham**: This is not a preserved milk. As soon as it is drawn, it is run over heated rollers and comes off in the form of films, which are broken up and powdered.

Dr. **Wield**: You cannot bring up a child for six days on milk, and put it on the seventh on a patent food. You would make from a healthy to an unhealthy child.

Mr. **Denham**: I know your time is very precious, and I had not the slightest idea that I should be invaded by such a large and so influential a deputation. Had I any such intimation I would have arranged for your reception in a more commodious room. But this is a matter of very serious importance, and I think the public will recognise it as such, and the House will recognise it as such when they see so many leading and busy men at this hour of the day dedicate a portion of their time to discuss this question. The matter has so far been regarded from the standpoint of rest to those engaged in the occupation. Noting that in Victoria it is enacted that no milk shall be delivered after 12 on Sundays, it appeared possible that some such provision might be enacted here. I grant it the weather is somewhat warmer here than there, but still they have their warm spells.

Dr. **Turner**: They have a higher infant mortality there than here.

Mr. **Denham**: When I got Dr. Brockway's note advising me of this deputation, I wired down to Melbourne to ascertain what effect the one delivery on Sunday had on the health of the community. The reply is not too clear, but my impression is that milk is delivered in Melbourne all hours of the day on Sunday, but it is seen that those engaged in the trade get a half-holiday some day of the week. That is the impression conveyed by the letter from Victoria, which, however, is, as I said before, not too explicit. That seems to show that it is not practicable to restrict the hours of milk selling on Sundays. So far as those engaged in the trade are concerned, they seem to be divided. One large number urge they should be allowed to have their Sunday afternoons off, and quite a number urge that they would be inconvenienced with the prohibition enforced. So far as those engaged in the trade are concerned, I think the Legislature will have to let them stand aside. The main question is one of health, and you have brought certain facts before me this morning that I will take care are communicated in the form of a circular to each member of the Council and Assembly, so that if any amendment should be inserted in the Council when it comes down to the lower Chamber the members will have before them the views of the medical profession of the city. I can hardly conceive that your views will not be received with the profoundest respect. It is a great thing when gentlemen who have dedicated their lives to the profession you are engaged in should be so much interested in this matter as to come out of their way to put these facts before me, and I can again assure you that your views will be put before the mem ers of the Legislature.

The interview then terminated.

[The clause has been withdrawn from the bill.]

At a meeting of the committee which controlled the recent fête held at Burwood, Sydney, in aid of the Queen Victoria Homes for Consumptives it was reported that the gross receipts from the fête totalled £302 and the expenditure about £48. It was announced that an art union to dispose of the residue of some of the stalls had been arranged by Dr. Blaxland. The results of the fête showed that the work done by the ladies had been very successful.

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·REVIEW OF CURRENT MEDICAL LITERATURE.

SURGERY.

The subject of aseptic surgery has been prominently brought before the profession lately, as a discussion took place on "The Aseptic Treatment of Wounds" at the annual meeting of the British Medical Association at Oxford, which is reported in the *British Medical Journal* of October 1st, 1904. Papers were contributed by Burghard and Leedham-Green, and amongst the speakers were many of the leading surgeons of the United Kingdom. A paper by Watson-Cheyne, who was to have opened the discussion, will also be found in the same issue. Three "Original Memoirs"—two on "Aseptic Surgical Technique" and one on "Some Studies in Asepsis"—appear in the October number of the *Annals of Surgery*. Two papers bearing on the same subject were read at the November meeting of the N.S.W. Branch of the British Medical Association, and appear in this issue of the GAZETTE.

As the *British Medical Journal* is in the possession of most of our readers, we shall more particularly notice the contributions in the *Annals of Surgery*. Ochsner, of Chicago, deals with the "Minimum Requirements for Aseptic Surgical Operating in a Hospital in which the *personnel* of the Operating Room is permanent." He pleads for *simplicity*, as any system which is complicated is certain to contain elements which will not be fully comprehended by some person who may be necessary to carry out some portion of the plan. Next, there should be *uniformity*, as if the chief does not uniformly do the same thing in the same manner under the same conditions, it is impossible for his assistants to thoroughly acquire a system. There should be *reasonableness*. The system must provide for every contingency, and each element of the system must be carefully studied before it is established. *Disinfection of the patient*. After a warm bath, castor oil and an enema, the skin over the seat of operation is thoroughly scrubbed with green soap and warm water, shaved, scrubbed with strong alcohol, and covered with a moist dressing of gauze saturated with a 3 per cent. carbolic acid solution. Just before the operation this dressing is removed, and the skin again scrubbed with strong alcohol. In the *disinfection of the operator and assistants* the most important precaution taken is to keep the hands out of pus. Rubber gloves are used when dressing or touching suppurating cases. The method used for cleaning the hands is (1) scrubbing in warm water with green soap, (2) cleaning the finger-nails and re-scrubbing, (3) wash off the soap under a running stream of boiled water, (4) wash them first in 1 in 2000 sublimate solution and afterwards in strong alcohol. One point insisted upon is that everyone connected with the operation have a smooth skin or wear gloves. Care is taken not to speak or breathe into the wound. All instruments, except knives, are boiled for half an hour. Knives are disinfected with alcohol. Silk, silkworm gut, horsehair, drainage tubes, nail-brushes and all basins are boiled for an hour. Dressings, sheets, aprons, etc., are disinfected in a steam steriliser. Catgut is prepared by soaking for a month in sulphuric ether, then for one month in strong commercial alcohol, in which one grain of corrosive sublimate to the ounce has been dissolved, the solution being renewed once during this time. It is then preserved indefinitely in a solution of one part of sterilised iodoform, five parts of ether, and fourteen parts strong commercial alcohol. It is never placed in water. It will last seven to ten days, according to the size used. For herniæ and the suturing of bones a chromicised gut is used, lasting from 20 to 30 days. This is prepared as follows:—The catgut is immersed in ether for one month, then in a solution prepared in the following manner: Dissolve one ounce of chromic acid in five ounces of water and add to this one quart of glycerine. Immerse the catgut in this solution for 72 hours, then wind on wooden cards or ground-edged slides, such as are used for mounting specimens for microscopic examination, and place in a solution of one-part carbolic acid in five parts of glycerine for two weeks; then preserve indefinitely in the iodoform-ether-alcohol solution described above.

Drainage is used in large wounds, such as breast amputations, and always in wounds which are primarily septic. *Irrigation* is seldom used. *Contact infection*. The author's observations have convinced him that the only form of infection which must be considered in surgery is contact infection. This is due to the introduction into the wound of septic material from unclean hands, instruments, sponges or dressings, or from speaking or breathing into the wound. Monks, in his article, states that the number of aseptic precautions has now increased to such a degree as to make it desirable, for the sake of simplicity, and in spite of the good results usually obtained under the old methods, to determine, so far as is possible, which are the really essential parts of the process and which can be done away with. After discussing the subject under the two headings, "Preparation for an Aseptic Operation," and "Conduct of an Aseptic Operation," he concludes with the following "Summary of Minimum Requirements for Aseptic Work, as given in this paper":—1. Materials to be sterilised in saturated steam in the autoclave for one hour under 15lb. pressure, rubber gloves and salt solution under 10 lb. pressure. If there is not sufficient space in the autoclave for the gauze dressings, they may be baked. 2. In hospitals without proper facilities for sterilisation of absorbable ligatures, these may be obtained from reliable dealers whose business reputation is at stake. 3. An operating room which can be easily cleaned, and which is cleaned, where the air is kept as free from dust as possible, where draughts are minimised, and where formalin fumigation is thoroughly and systematically practised. 4. A hot bath for the patient, and a cleansing and shaving of operating area the night before operation if possible (as an extra precaution). Just before operation, a second cleansing and sterilisation with 70 per cent. alcohol, or some equally efficient method. 5. Thorough mechanical cleansing of the hands, and sterilisation by 70 per cent. alcohol, or some equally efficient method. 6. Ten minutes boiling for instruments, special attention being paid to taking apart clamps and hæmostatic forceps, or at least unlocking them. 7. Caps, masks, and sterile gloves always to be worn, at least on major cases. 8. Warm sterile salt solution for irrigation and washing. 9. Belief in the aseptic idea, fixed aseptic habits, and aseptic co-operation on the part of all engaged in an operation. 10. Instruction of assistants and nurses as above set forth.

Harrington, in his "Studies in Asepsis," deals with the matter as a bacteriologist. He thinks surgeons are, to some extent, inclined to over-estimate the importance of small possible dangers, and to take more or less for granted absolute immunity from some others of greater magnitude. In testing the air of operating rooms he has found as many as 137 organisms—chiefly pyogenic—deposited on a square inch in one hour. He joins issue with the dogmatic statement that "the purest of sweat is impure; it is never sterile." Six different times in his laboratory sweat has been made to flow from well-cleaned and, so far as possible, sterilised forearms and hands, encased in sterile glass cylinders heated by appropriate means, and in not a single instance could a bacterial growth be obtained. Of far greater importance is the danger of infection through saliva. (A paper on that danger was reviewed in our March number.) Dealing with the sterilisation of dressings, sponges, etc., instances are given where the articles were so tightly packed into the autoclave that it was almost impossible for the steam to penetrate them. On the other hand, in some hospitals the sterilisation of dressings and sponges is carried to an unnecessary degree of thoroughness, which involves wasting much valuable time. He refers to fractional sterilisation. The author has given a good deal of attention to the value of the different methods in vogue for sterilising the hands, and has especially devoted a lot of time to the permanganate of potash and oxalic acid method. He repeated the process no less than 25 times in succession, and the conclusion arrived at was that permanganate removes no dirt and destroys only weakly resistant bacteria. Exhaustive experiments were made as to the time it took to destroy *staphylococcus pyogenes aureus.* Twenty-two preparations were used; not one of them killed under two minutes, and most of them took over five minutes. One in twenty carbolic and one in twenty trikresol were the only two that killed in two minutes. Many combinations were tried, and the one that proved most efficacious was the following:—Commercial alcohol (94 per cent.), 640 cubic centimetres; hydrochloric acid, 60 cubic centimetres; water, 300 cubic centimetres; corrosive sublimate, 0·8 gramme. Harrington first used a solution that would kill staphylococcus aureus in ten seconds, but it was too strong for the hands. He then weakened it in different ways until he arrived at the above formula, which will kill pyogenic bacteria on silk thread in about ten seconds. He used it against pus from a carbuncle in comparison with carbolic acid and trikresol. The 1 in 40 carbolic killed in four minutes, the 1 in 40 trikresol in five and a-half minutes, and the mixture in less than one minute. (Killing bacteria in pus is quite a different thing from killing them on threads and glass beads.) Other specimens of pus were killed by carbolic and trikresol in two minutes, and by the mixture in less than 30 seconds. As far as it has been used, this mixture has given very satisfactory results for disinfecting the hands, without proving too severe on the skin. Out of 100 plantings only three growths were obtained.

The Centrifugal Spread of Mammary Carcinoma in the Parietes and its bearings on Operative Treatment.

Handley (*Archives of the Middlesex Hospital,* vol. 3) contributes an interesting paper on the above. There is much evidence that cancer of the breast spreads centrifugally, and by continuity from its seat of origin in a way not unlike the spread of erysipelas, though not in the same plane. The area of extension in both instances is rather bounded by two dimensions than by three, and tends to assume a circular form, with the primary focus as centre. The chief layers to be considered in the centrifugal extension are (1) the skin and subcutaneous fat, (2) the deep fascia, (3) the bones. After fully discussing the evidence to be gained from a study of 329 cases the following conclusions are drawn: 1. The study of secondary growths in the skin and subcutaneous fat and in the bones affords clear evidence of a slowly progressive, centrifugal, quasi-serpiginous spread of breast cancer in the parietes in continuity with the primary growth, and independent of the flow of lymph and blood. 2. The scattered and isolated character of the deposits in the skin and bones indicates that it is not along these layers that the growth primarily spreads. 3. A study of the results of operation where (*a*) much skin and fascia, (*b*) less skin and more fascia are removed, strongly suggests that parietal extension does not take place primarily along the skin, but along the deep fascia, with secondary lateral offshoots (*a*) towards the surface as subcutaneous nodules, (*b*) towards the deeper tissues, as bone (or muscle) deposits. Modification in operative procedure suggested by the preceding considerations:—1. Removal of skin. Wide removal of the skin is necessary, owing to the vertical extension to it, after a time, of the growth which is spreading in the deep fascia; but removal of such an amount as interferes with subsequent approximation of the edges of the wound seems to be unnecessary, save in exceptional cases. If after the primary operation skin nodules appears in the neighbourhood, *their significance depends on whether they lie within the area from beneath which the deep fascia has been excised or outside it.* In the former case they are to be regarded merely as local deposits—"efflorescences"—whose roots have been already moved, though at the time of the operation they themselves were too small to be detected. Such nodules can, therefore, be excised with every prospect that recurrence in the neighbouring skin will not take place. On the other hand, subcutaneous nodules appearing in an area where the deep fascia is still intact indicate wide extension of the growth in the latter layer. If they extend far from the original primary growth the case must probably be regarded as hopeless, owing to the large area of fascia involved. 2. Removal of the deep fascia. It has been explained that the invasion of the fascial lymphatic plexus is in no way limited by the boundaries of the pectoral fascia. *The aim should therefore be to remove as widely as is practicable a circular area of deep fascia with its centre at the primary growth,* remembering, however, that growth extends in the fascia rather more readily in a vertical than a horizontal direction. The use of the expression, "removal of the pectoral fascia," instead of "removal of as wide an area as possible of the deep fascia," and the exclusive attention paid to the axillary glands as the channels of dissemination, have led to neglect in the excision of the deep fascia over the lower part of the thorax and the upper part of the abdomen. It seems to be in this direction that the scope of the operation requires extension, rather than in the direction of opening up the posterior triangle. The distance from the nipple to the clavicle may be taken as the radius of the circle of deep fascia round the growth, which can, in practice, be removed without difficulty by undermining the skin-flaps sufficiently and prolonging the incision somewhat in a downward direction. If the growth starts under the nipple, the deep fascia should accordingly be removed—above, up to the clavicle; internally, one to two inches above the middle line; externally, just beyond the anterior edge of the latissimus dorsi; below, *to a horizontal line running at least two inches below the tip of the ensiform cartilage.* If the growth is in the lower and inner part of the breast, the circle of infected deep fascia will encroach still more on the surface of the abdomen and over the opposite side of the breast, and removal of the deep fascia in these directions must be carried out yet more widely. Great care should be taken to remove every particle of the origin of the pectoralis major from the rectus sheath.

THERAPEUTICS.

Marmorek's Anti-Tubercular Serum in the Treatment of Pulmonary Tuberculosis.

Richer (*Montreal Medical Journal*, September, 1904) offers a small number of observations of various types of pulmonary tuberculosis treated with Marmorek's serum. From these he draws some conclusions, but admits that his observations are not sufficiently complete to make his results final. However, as a result of his clinical tests he feels assured that this serum is truly an anti-toxine, and that it does possess a power of inhibiting the growth of the tubercle bacillus; but, as with all anti-toxines, this power is ephemeral. He records six cases of more or less advanced pulmonary tubercular disease, in all of which more or less imimprovement was effected. One notable effect was the reduction in temperature and pulse rate; the amount of expectoration was also considerably reduced. In a seventh case, in which there was acute miliary tuberculosis, and in which the condition was hopeless, two injections of five c.c. of the serum exercised no effect upon the symptoms. The patient died 36 hours after the second inoculation, and the writer considers that this patient's death was due to super-intoxication, and was no doubt accelerated by the use of the serum. He considers that this is another argument in favour of the powerful antitoxic properties of the serum, and compares this result with the undoubted symptoms of super-intoxication which assert themselves when very potent anti-diphtheritic serum is used too late in diphtheria. The writer's observations do not extend over a sufficiently long time to enable him to answer definitely the question whether the effects of the serum are lasting. But he refers to one case in which after 30 inoculations the patient was practically cured; yet two months afterwards bacilli were again found in the sputum, and there was some slight indication of the return of the disease at the original spot. He considers that now there is fair evidence that we possess an antitoxic serum capable of conferring passive immunity.

Hyoscine.

McLean Pitts (*Mobile Medical and Surgical Journal*, August, 1904) discusses the physiological action and therapeutical indications for the use of this drug. It resembles atropine, and its continual use is said to seriously derange the mental faculty. It depresses respiration, slightly slows the heart action, and in full doses has a tendency to produce paresis of throat muscles; dryness of throat and thirst often exist after a medium dose has been administered. Its effect on the pupils is not constant; it specially affects the motor tracts of the spinal cord. It is best administered hypodermically combined with strychnine sulphate or some other stimulant. Shortly after the administration of the drug the patient passes through a stage of excitement and some depression, lasting about three-quarters of an hour. Within an hour there is produced a sensation of fatigue, followed by drowsiness and a desire to remain perfectly quiet, soon followed by sleep. This rest generally lasts six or seven hours, and on awakening the patient feels much refreshed, and shows no sign of depression. In recent years it has been much used in the treatment of the opium and liquor habits, and the writer considers it one of the best sedatives, giving rest and sleep and assisting nature in restoring many of these unfortunate drug habitués to the normal conditions of life. It has also been used with much success in quieting and controlling patients during the excitement of acute mania. In *delirium tremens* it will quiet the patient, relieve the restlessness, and in most instances produce a good refreshing sleep. In ordinary cases of drunkenness a small dose of hyoscine to quiet and a good cathartic will have the patient relieved in ten or twelve hours. In nervousness and hysterical conditions in women, hyoscine often gives results better than morphine or cocaine, as there is no danger of the patient contracting a drug habit. Some authorities lay much stress upon the good results obtained from hyoscine in relieving the tremor and allaying the restlessness in paralysis agitans, especially when used in very small doses. It is also recommended to quiet the violent movement in acute chorea. In all cases where excitement is great or sleep is to be acquired, and there is depression, hyoscine in combination with some stimulant is useful. On account of its tendencies to produce paresis of the throat muscles, the drug is contra-indicated in affections involving throat muscles, such as diphtheria. Idiosyncrasies of the patient must be taken into consideration when administering this, as all other drugs. It may be given in doses of $\frac{1}{100}$—$\frac{1}{150}$ grain of hyoscine combined with $\frac{1}{40}$ grain of strychnine sulphate, hypodermically.

Veronal.

In *Merck's Archives* for October, 1904, two reports from German sources on the beneficial effects of veronal as an hypnotic are quoted. Dr. Leopold Neufeld, writing in *Aerzt. Rundschau*, 1904, No. 11, illustrates its effects with four cases, and concludes as follows:—Veronal is a harmless hypnotic. Dissolved in warm liquids it induces sleep in half to one and a-half hours, according to the patient's condition. In all his cases sleep was brought on. The veronal sleep is very close to physiological sleep, closer than other hypnotics, and after awakening the patient experiences no ill-effects, especiully if the dose is individualised. Dr Hermann Davids, assistant physician to the Ophthalmic Clinic at Giessen, states that veronal has taken a pre-eminent place among hypnotics at that institution. The drug is almost always well borne, and has always the desired effect. According to the observations made at this clinic, 4 to 8 grains suffices in general for women, and 8 grains for men. These doses seem to be the most proper ones, as they produce sleep without any disagreeable effects worth mentioning. Drowsiness on the following day is, however, not a rare phenomenon, even after these small doses. This author emphasises the value of veronal as a sedative, especially in ophthalmic patients. Alfter many eye operations the patient must remain quietly in bed for a longer or shorter period; but it happens only too frequently that a successful operation is followed by a poor result merely on account of the restlessness of the patient. It is in these post-operative conditions that veronal is very valuable as a sedative, allowing the patients to remain in bed without feeling the irksomeness of their condition. The author describes the case of a woman of 74 years in whom a 15 grain dose of veronal produced intense sleep lasting for about 36 hours, irregular pulse, erythema, and itching of the chest, forearms, hands and legs. The erythema remained for two days, and then gradually disappeared. In about ten days the skin, especially on the hands and feet, began to peel off in large scales.

Bromopin.

According to Thumen (*Deut. Mediz.-Zeit.*, 1904, No. 21), bromopin has an advantage over the alkaline bromides, in that it can be used over long periods of time without upsetting the digestion. It is thus useful in epilepsy; and the author also speaks of its beneficial effects in cases of neurasthenia and hysteria, in allaying the nervous cardiac palpitation which these patients experience, especially at night time. It is also effective in allaying painful erections in gonorrhœa, and in tablespoonful doses it effected considerable improvement in two cases of trigeminal neuralgia.

EAR, NOSE, AND THROAT.

The Rational Treatment of Nose and Throat Diseases.

Roy (*Charlotte Medical Journal*, July, 1904) writes an instructive article on this subject. Dealing with pain in the nose, he says this does not often occur unless there is severe acute inflammation, or acute traumatisms. In acute rhinitis, the membrane is oversensitive especially to cold and to a dusty atmosphere. For this reason it is illogical to allow people suffering from acute rhinitis to go out in the cold during winter and have the nasal cavities sprayed, thus causing more irritation of the mucous membrane. These cases belong to the family physician and not to the specialist, and need mild depletive measures at home. With regard to the treatment of stenosis, a stoppage of free respiration through the nose, this must be dictated by a due consideration of the cause. While in some cases reduction of the membrane by the cautery, snare or knife is justifiable, in others due to stasis the cause of the condition must be removed to gain a permanent result. For instance, a man who eats and drinks to excess may suffer from nasal stenosis every morning. In such a case the indication is not to snare or cauterise, but to open the bowels freely, and stop the pernicious mode of living. He quotes Mulford as having called attention to the importance of urinalysis in the proper treatment of nose and throat diseases. He has shown that the condition of the kidneys is in a large measure responsible for certain changes seen in the nose and throat which entirely disappear under systematic treatment.

Treatment of Laryngeal Tuberculosis by Formalin.

Lockard (*Laryngoscope*, October, 1904) states that in his opinion formalin has advantages which are superior to all other forms of treatment in laryngeal tuberculosis. He maintains:—(*a*) It surpasses all other bactericides in solutions of a strength which can be tolerated. (*b*) In tubercular ulcers it is fully the equal of, and probably superior to, lactic acid. (*c*) Its effect upon vegetations is prompt and pronounced. (*d*) In infiltrative cases it is by far the most satisfacfory remedy. (*e*) It possesses some anæsthetic properties. (*f*) It is the only remedy of the curative class that can with safety be placed in the patient's hands, thus maintaining a continuous cleansing, germicidal and stimulant action. The writer uses formalin according to the following method:—After thorough cleansing with a one-half p.c. solution, and the previous application of cocaine, the part should each day be vigorously scrubbed with a solution of from three to ten p.c., depending on the nature of the lesion and the susceptibility of the patient. In addition to these daily treatments, the patient should use a spray, about 1·250, every three or four hours.

Sepsis and Asepsis in Nasal Surgery.

Gibb (*Therapeutic Gazette*, September, 1904), from his experience in intra-nasal operations, arrives at the following conclusions:—1. In intra-nasal operations, other than careful cleansing of the mucous membrane to free it of crusts, pus, inspissated mucus and foreign matters, no especial antiseptic precautions are necessary. 2. Careful antiseptic preparations of the hands of the surgeon, the instruments, gauze, cotton, etc., is desirable. 3. Sepsis is not the rule after intra-nasal operations, and when it does occur is usually mild and transient; but it may be rapid, severe, and grave. 4. Nasal sepsis is manifested by follicular tonsillitis, inflammatory changes in the nasal chambers, and in some cases acute otitis media. Gibb quotes a case of his own, in which a fatal result ensued after a sawing operation on the septum to correct a deviation. A splint was inserted, and this was removed, and after douching of the nostrils, replaced on the second day. He was not seen again till the seventh day, when on being visited at home he was found to be in a septic condition, showing some evidence of meningeal irritation. His condition rapidly grew worse, and he had hyperpyrexia, delirium, coma and death on the eighth day after the operation.

Laryngectomy for Cancer.

Germain (*Journal of the Amer. Med. Assoc.*, April, 1904) states that the mortality for laryngectomy is 35 per cent. for all cases up to 1897. Of the cases operated on from 1888 to 1898, the death rate has fallen to 14·5 per cent., with a corresponding fall in the number of recurrences—11·2 per cent., as compared with 30·3 per cent. He believes this marked improvement to be due to the new methods, which aim to avoid sepsis and to do away with aspiration pneumonia. The present operation may be divided into two steps—(1) preliminary tracheotomy; (2) after a few days or weeks, laryngectomy in the Tredelenburg-Rose position. Cocainisation of the superior laryngeal nerve is desirable. Primary suture of the pharyngeal and œsophageal wounds saves the patient weeks in convalescence. Gluch reported 34 cuses, with 31 recoveries; and Gray, of Von Bergmann's Clinic, 9, with one death.

The Etiology of Ozœna and its Relation to Pulmonary Tuberculosis.

Theisen (*The Laryngoscope*, October, 1904), in a valuable article, concludes after a discussion of the subject:—1. Sinus disease probably causes ozœna in a certain proportion of cases, or at least it must be considered a strong predisposing cause. 2. Suppurative processes in the accessory sinuses, as shown by Pearce's investigations, are frequently present in certain of the infectious diseases of childhood, particularly scarlet fever, measles and diphtheria, and for this reason these infectious diseases must be considered at least possible etiological factors of ozœna. 3. While a certain percentage of cases are caused by sinus disease, this is not sufficient to explain the pathogenesis of the whole clinical picture of ozœna. 4. A large number of ozœna patients having pulmonary consumption would certainly point to the nasal condition as a strong predisposing cause for the development of the tuberculous condition.

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CORRESPONDENCE.

London.

(FROM OUR OWN CORRESPONDENT.)

Opening of the London Medical Schools—Visit of French Doctors to London—Physical Education—Pharmacy as a Profession.

THE Medical Schools of London entered upon the duties of another winter session on October 3rd. At many of them work was resumed without any inaugural formality, but at others the time-honoured custom of an introductory address was adhered to. At Charing Cross Hospital the occasion was utilised for the delivery of the fifth biennial Huxley lecture. The orator on this occasion was Sir William Macewen, Regius Professor of Surgery in the University of Glasgow, and he chose for the subject of his lecture "The Function of the Cæcum and Appendix." He pointed out that it might well be asked whether the human body was so imperfect that they required to submit it to the numerous rectifications which were recommended to be carried out after we came into this world. The more one looked into the human body, saw it work, and the better one understood it, the more was one struck by the wondrous utility, beauty, and harmony of all its parts. There were many parts of the human body whose functions were unknown. Man, like all other animals, was undergoing slight modifications as the years passed; but, with all his alleged imperfections, the normal man was a much more perfect man than the physiologist and surgeon could make him. The lecturer dealt at some length with the question whether the appendix was or was not a useless organ, and with the causes of appendicitis, which he said was intimately associated with the digestive processes and the factors controlling them. He deprecated the haste with which food was consumed by many people, and said there was no provision in man for "bolting food." It was a matter of great moment to commence the digestive process well, and this was impossible under such conditions as those which attended the ingestion of a standing lunch eaten against time, with the mind full of business. At University College Hospital the introductory lecture was delivered by Professor J. Norman Collie on "The Relation of Chemistry to Medicine." He said that it was imperative that medical men, in these days of advanced science, should be able to follow the work done in chemical laboratories, for the chemist, in his analytical methods, helped medicine in many ways, especially in testing, purifying, and improving drugs and foods. The learned Professor dealt briefly with the history of alchemy and chemistry from the time of the Egyptians till to-day, pointing out that at the end of the sixteenth century Paracelsus was born. Although he left his mark in history in many ways contemptible, Paracelsus, in his writings, left works which made their mark in the history of chemistry. With regard to the nineteenth century, he remarked on the discoveries of anæsthetics, antiseptics, and new drugs. He drew attention to the process of the assimilation of food, which, he said, was purely chemical, for the human body was the most wonderful chemical laboratory in existence. At Middlesex Hospital, "Practice and Theory in Medical Study" was the subject chosen by Dr. Wethered for the inaugural dissertation. At the outset he urged upon the students the necessity of practice. Theoretical knowledge was, of course, also requisite, but, above all things, they must be practical. For practical work there was no substitute. To see much and see it well was the sole means of attaining perfection in all the sciences of observation. It was impossible to learn medicine and surgery from books. A knowledge of these subjects could only be obtained by observation and study of the patients in the wards and out-patient rooms. The embryo physicians and surgeons should pay more attention to the study of physical improvement, as exemplified by gymnastics and manly sports, in order that they might contribute their share to obviating the danger of national physical degeneration. It was now a recognised fact that a man could excel in his studies as well as in athletic pursuits, and there was no reason why a healthy participation in manly games should interfere with professional duties. A greatly improved tone had been apparent among the boys of public schools since games had been made compulsory and loafing sternly discountenanced. The continuance of some form of physical exercise after school life had scarcely been sufficiently insisted on by many medical men. Moreover, the regular pursuit of some form of athletics greatly raised the moral tone of a man. The individual who wished to improve his physical powers must cultivate habits of temperance and self-control. Evil habits, which the self-indulgent and slovenly man so easily fell a prey to, were obnoxious to the athletic and healthy bodied, for late hours and their numerous evil consequences would be perforce eschewed. Let the medical student, then, learn to live, that he might be able to draw from his personal experience when in the future he advised his patients as to the best way of keeping well. At St. Mary's Hospital, Professor Wright began his address by pointing out that the twentieth century world of the rich offered the spectacle of a civilisation complete, or practically so, with respect to the achievement of directive control over the forces of nature, but utterly incomplete with respect to the achievement of direct control over the processes of disease. Practically, no work was in progress in connection with the resolution of the problems of disease. Here and there an isolated worker was to be found devoting to the work of medical research such free time as he might have at his disposal; but it was doubtful whether there were among the forty or more millions of the British race 100 scientific workers actively and continously engaged upon the problems of disease. This condition of things depended upon economic causes. Not only was there nothing in the form of reward for successful solution of the problems of disease, but the worker who devoted himself to the task of seeking a solution for this, the outstanding problem of civilisation, immediately found himself face to face in his own person with the problems of the primitive savages, with the problem of finding subsistence, and clothing, and shelter from the weather. He urged the advantage of the combination of research with the present hospital system, stating that it would operate in the direction of extinguishing the present and ill-informed crusade against medical research, which derived its strength from the fact that when a laboratory divorced from its proper complement, a hospital, that laboratory fell under the imputation of seeking curious knowledge without any thought of its application of that knowledge to the benefit of man. In conclusion, Professor Wright gave examples of problems which urgently invited research, and, taking up for consideration the outbreaks of infectious diseases, which were of such serious financial importance to schools, he showed that even the large financial interests at stake could not, under the conditions which at present obtain, attract research to the solution of the comparatively simple problem of limiting the spread of some of these diseases. At St. George's Hospital, Professor Macalister, of Cambridge, devoted his remarks to the history of medical education. At the outset he warned the students that the medical profession required a more extensive and arduous training than any other, which could only be accomplished in the allotted five years by those who wasted no time from start to finish. The sciences upon which medicine depended were growing rapidly, and new departments were continually being developed. The history of medical education was sketched, and its progress traced. Its development was, like that of an organism, by processes of specialisation and differentiation, and the persistence of the results of growth demonstrated the law of the survival of the fittest. The lecturer pointed out that an element of danger was arising in the process of the development, namely, that as each of the fundamental sciences was growing so large, it was becoming necessary to appoint specialist teachers and specialist examiners, and, in consequence, there was a risk that in the course of the teaching the great end and aim of the medical course, the training of skilful and well-equipped practitioners, might be lost sight of. He urged that all such teachers should remember that each science taught was not, for the medical student, an end in itself, but only a means to an end, and that the authorities should use every means to safeguard the interests of a well-balanced and efficient professional training.

A large and representative body of physicians and surgeons, numbering upwards of 150, arrived from Paris on October 9th to pay a four days' visit for the main purpose of visiting hospitals and laboratories in and around London. The party was met at Charing Cross by Sir William Broadbent and other members of the London executive committee formed in connection with the occasion. On the morning of the 10th the visitors went to the Royal College of Surgeons, in Lincoln's Inn Fields, where a reception was held in their honour. M. Triboulet, the President, headed the party, which was accompanied by Sir William Broadbent and other members of the English executive. Mr. J. Tweedy, President of the College, wearing his robes of office, received the guests in the great hall, where each was separately presented to him. He then repaired to the half-landing of the grand staircase and addressed the company as follows, speaking in French :—" Gentlemen, in the name of the solidarity and universality of biological and medical sciences, I have the honour of offering you a cordial welcome to the College of Surgeons of England. Although we speak different languages, we are all members of the same family. We have a common parentage, and are all co-heirs with Harvey and Hunter and their great French prototypes. The spirit of John Hunter permeates this institution. Gentlemen, again I bid you welcome to the Royal College of Surgeons of England." M. Lucas Chemponnier, a Paris surgeon, briefly acknowledged the welcome, and then the visitors separated into groups and visited the library and the various sections which most appealed to them. Special interest was shown in the Hunterian collection. During the afternoon visits were paid to various hospitals, and in the evening a reception was held in Cavendish Square by Dr. and Mrs. Dundas Grant. On the 11th, the day's engagements appropriately commenced with an inspection of the French Hospital in Shaftesbury Avenue, which is open to all foreigners who speak the French language. A large section of the guests went afterwards to the physiological laboratory of the University of London, where much interest mas manifested in a practical demonstration by Dr. Waller of a new method for the simple, safe, and certain administration of chloroform. Other sections devoted their attentions to other hospitals, and at noon a *dejeuner* was given by the Dean of the Faculty of Medicine and Mrs. Butlin at the Whitehall Rooms. During the afternoon the hospital and laboratory visitations were resumed. On the 21st the first engagements were at the laboratories of the Imperial Cancer Research Fund, the Lister Institute of Preventive Medicine, and the County Council Laboratory at Claybury, which is maintained for the prosecution of pathological work in connection with the treatment of the lunatic and imbecile patients in the public asylums. King Edward's Hospital in Grosvenor Gardens was also visited. This is a small institution which was founded by Miss Agnes Cayzer in the first year of the Boer war, and has since been maintained entirely at her expense for the treatment of officers. In the evening a dinner was offered to all the visitors at the Hotel Cecil by the London Executive Committee. Sir William Broadbent occupied the chair, and the company numbered close upon 400. In proposing the toast of " The King," the Chairman read the following telegram which had been received from his Majesty's Equerry at Newmarket :—" I am commanded by the King to inform you that he has noticed with great satisfaction that so large a number of French professors, physicians, and surgeons have come to England to inspect the hospitals in London. His Majesty has always taken a warm interest in these institutions, and he has observed, therefore, with much gratification the success which has attended the visit of these gentlemen, and he hopes that mutual benefit to both countries will ensue from it. The King remembers with great pleasure that, on the occasion of the International Medical Congress in London, he had an opportunity of making the acquaintance of their distinguished countryman, M. Pasteur." The following reply, in French, was addressed to the King at Newmarket :—" In the name of the French doctors who have come to London, Professor Lucas-Championniere, President, and Professors Huchard, Poirier, and Chauffard, of the Faculty of Medicine, Paris, beg his Majesty to accept the expression of their most respectful sentiments, and to thank his Majesty for his most gracious message." Several toasts followed, and the banquet was eminently successful. The arrangements of the London committee for the entertainment of their guests from across the Channel were excellently managed, and much credit is due to Dr. Dawson Williams and Dr. Jobson Horne for the admirable way in which their secretarial duties were performed. The visitors repeatedly expressed themselves as delighted with all they saw. They were much struck with the fundamental difference between the hospital systems of Paris, where the hospitals are supported by the State, and London, where they are wholly dependent upon the voluntary contributions of the charitable public. The nursing arrangements in London hospitals also arrested their attention and their superiority over those of Paris was explained as being due to the fact that in England nurses are drawn from a higher grade of the population than in France. They admired the greater cubic space per patient provided in London than in Paris ; but they demurred at the greater cost of the London patient, which is apparently about four times more than that of the hospital inmate in Paris. Although no official announcement has yet been made on the subject, it has been arranged by the French doctors that their British colleagues shall be invited to pay a return visit to France next year. Such international courtesies have much to commend them, and are not the least valuable products of the *entente cordiale*.

In the course of his presidential address to the Salt School, Saltaire, delivered on October 6th, Sir James Crichton Browne criticised somewhat fully the report of the inter-departmental committee, and enunciated some doctrines in regard to physical training with which everyone will not be found to agree. His ridicule of nasal respiratory exercises and his advice that girls should be taught rope-climbing are, for instance, points which are, perpaps, open to adverse criticism. But, on the other hand, many of the admitted evils in our present system of education to which he called attention cry out to-day for reform, and their remedy would undoubtedly contribute to the physical improvement of the race. Sir James condemned severely the cooping up of children in schools before five years of age, urging that they should be allowed to exercise themselves naturally in the open. Properly regulated physical exercises would afford salutary relief to the fatigue of school work. To call upon an underfed child, however, to engage in muscular exercises was simply cruelty. Physical education, to be fully successful, must have regard to the order of development of the brain centres, and he believed time would bring about a scientific gradation of physical exercise corresponding with the periods and stages of cerebral evolution. As the nascent period of the motor centre of the hand was probably from birth to the end of adolescence, the most active epoch being from four to fifteen, it was a menace to our industrial position to leave children during the whole of that period without manual training. Every boy should learn some handicraft, and every girl be taught to use her fingers deftly. Every boy and girl should be taught to swim, to go up a rope hand over hand, and to dance nimbly and gracefully. In spite of the vast ameliorative measures of the last 50 years, we still had crowds of lunatics, idiots, cripples, inebriates, criminals, and hopelessly-diseased persons, and no one could say that the physique of the working classes in our large towns was satisfactory.

At the opening of the sixty-third session of the School of Pharmacy of the Pharmaceutical Society, Dr. A. W. Crossley, the newly appointed Professor of Chemistry to the Society, devoted his inaugural address to a plea for a wider recognition of pharmacy as a science and as a profession, rather than as a trade. He urged upon the students the great responsibilities they had undertaken in adopting pharmacy for the work of their lives, and begged them to approach their studies in a truly scientific spirit, and not to look upon the pharmacopœia as the Alpha and Omega of the life of a pharmacist. He deplored the lack of scientific knowledge which fostered the great distinction between a business and a profession, and then proceeded to consider the claims of pharmacy to occupy a professional status. Knowledge, in the wide sense, was deemed the monopoly of the professions; but, rightly regarded, nothing was more necessary to the engaging in any large business than a thorough and scientific comprehension of these underlying causes which influenced that business. According to one distinction, the buying and selling of tangible goods was a business, whereas the dispensing of knowledge was a profession. But surely there was scant difference between the actual processes of buying and selling goods and of buying and selling knowledge. "It was not the actual method of procedure which distinguished between a business and a profession, but the difference was rather due to the character, work, and mental powers of those engaged, which, if of a sufficiently high order, might raise any calling to the rank of a profession." Pharmacy consisted not merely of a knowledge of simple chemical bodies, but also of acquiring an insight into the methods of extraction, purification, and properties, both chemical and physiological, of some of the most complicated vegetable substances. Pharmacy was thus one of the greatest of applied sciences, and also had clearly a double claim to rank as a profession, for the pharmacist must be considered as being in part a merchant and in part a physician.

Tasmania.

(FROM OUR OWN CORRESPONDENT.)

The New Public Health Act—Chief Health Officer's Report—Metropolitan Drainage Board—Launceston Sewage—Hospital Abuse—The Chief Health Officer and the Local Authorities of Launceston.

A year ago the Government and Parliament of Tasmania, in a fit of panic induced by the smallpox outbreak, passed a new Public Health Act, brought into being a Public Health Department, and appointed a Chief Health Officer. Confident, however, in the innate powers and virtues of their new legislation, they seem to think that their decree is all-sufficient in itself to guard the health of the State, imagining perhaps that disease dare not transgress against an Act of Parliament. Such at least seems to be the only reasonable explanation that one can offer for the state of affairs which now obtains, and which is revealed by perusal of the Chief Health Officer's report. In this document, which is the first issued by the new department, in terms clear and concise enough to be understood by the most ignorant of our legislators, is revealed the exact position of affairs in Tasmania. In view of the fatal smallpox muddle of last year, which cost the State nearly £20,000, we might have thought that, whatever else was neglected, the Vaccination Act at any rate would have been properly administered. And what do we find? That vaccination has been to a great extent a dead letter. Even if it had been desired, there was no money to pay for it, for the £850 provided on the Estimates for the administration of the Public Health Act and Vaccination Act would be barely sufficient to supply the needs of the latter alone if it were efficiently administered. Can one imagine such crass stupidity? In Dr. Elkington's own words, "protection against smallpox appears to be a luxury which Tasmania cannot at present afford." Apparently under the same category of luxuries come the other requirements of a department of hygiene, inasmuch as requests for qualified sanitary inspection, for the provision of microscopical and bacteriological apparatus, for the establishment of land and maritime quarantine stations, etc., have all been refused; nay, it is no secret that some members of Parliament object to the cost of the new department, and talk of its coming abolition. Now, if there is one of the States of the Commonwealth which might be expected from mere selfish pecuniary, if not from higher motives, to aim at as perfect as possible a system of public hygiene, it is Tasmania, for endowed as it is with its temperate climate, noble lakes, rivers and mountains, which lend themselves to the ready attainment of that model state of hygiene, it would become the paradise of the health-seeker and the holiday-maker. The tourist traffic is estimated to be now worth to Tasmania some £100,000 to £150,000 a year; £3000 to £4000, representing 3 per cent. on the above, would be more than sufficient to cover the expenses of a properly organised department. But if our legislators do not take warning the tourist tide will turn back if proper drainage and disposal of sewage, faulty water supply, pollution of rivers, filthy and adulterated milk supply, not to mention minor offences, driving our visitors elsewhere, besides entailing on our own population perils of no little magnitude. The Government has now at its disposal a department with a capable sanitarian at the head; it must either lend him the pecuniary and moral support which is so necessary for the successful inauguration of a sanitary administration, or it must stand condemned as countenancing a mere sham, deluding the public with a false sense of safety, and imperilling the health and lives of its citizens.

Dr. Kendall, of Sydney, has been on a visit to Tasmania, his services having been engaged by the Metropolitan Drainage Board. He approves of the scheme which is being carried out, subject to an enlargement of the septic tanks and the provision of proper filter beds. There is no doubt that if this is done a filtrate purified to from 60 to 70 per cent. could be secured. One wonders how any opposition can exist to a work which, if properly managed, will transform the filthy methods now in vogue into wholesome scientific ones.

Dr. Kendall has also advised the Launceston Corporation as to the disposal of their sewage, which is at present being discharged into the river, with the result that the stream is befouled. He advises a septic tank installation, which, according to his estimate, will mean an outlay of something under £10,000. Even were the cost much higher, it would be money well spent, as there is no excuse for the continued and unnecessary pollution of the river.

A Royal Commission is about to investigate the administration of our hospitals. It is to be hoped that the members of the Commission will enquire carefully into the question of hospital abuse, which is becoming a very serious matter. In the north I notice that some of the medical staff of the Launceston Hospital have brought the matter before the committee of management, and medical men generally are complaining of the extent to which the abuse is growing.

A quarrel has arisen between the Chief Health Officer and the local authority of Launceston. Apparently the local officer of health, Dr. Wilson, refused to supply a report to the Chief Health Officer, and repeated applications failing to have any effect, Dr. Elkington called on the local authority to dismiss their officer. The local authority declining to do so, Dr. Elkington, under the powers entrusted to him by the new Health Act, himself executed the dismissal. It is currently reported that a *modus vivendi* has been arrived at, according to which Dr. Wilson will be reappointed on agreeing in the future to recognise the authority of the Chief Health Officer.

Victoria.

(FROM OUR OWN CORRESPONDENT.)

Medical Defence Association of Victoria.

THE Medical Defence Association of Victoria have asked for an expression of opinion from their members if it is worth while continuing their quarterly reports, because they receive so many inquiries concerning matters that have been referred to in former reports. This looks as if the Council found their duties too irksome; and if that is so, would it not be better for them to relegate their duties to other members of the profession who have more time and would put a little more life into the Association? Many members complain that very little notice is taken of their complaints, and some have gone so far as to say that, owing to following out the advice of the Association, they have lost a quarter of their income without any accompanying recompense.

Great complaints are made of various leaders of the profession for consulting with "blacklegs," and for taking honorary positions for which they should be paid. There is only one way to overcome all these difficulties, and that is by the amalgamation of all the numerous societies into one representative body such as the B.M.A.

In the last quarterly report of the Medical Defence Association of Victoria vaccination and mileage rates are referred to, also insurance rates; but the Association is quite powerless to deal with these points, and simply make recommendations that are absolutely useless. The appointment of undesirable practitioners to health officerships is referred to, also post-mortem work in the country, where the large (*sic*) sum of 1s per mile is allowed one way, to the great detriment of the country practitioners' practice. All these matters, and a great many others, can only be dealt with in the one way, viz., by a powerful association.

The Medical Institutes are still flourishing, and threats are freely made of fresh institutes in other suburbs. At Ballarat the proposed Medical Institute has fallen through, and in Bendigo the profession are resisting their encroachments as well as they are able. At Williamstown there is a decided attempt to start a Medical Institute, and it is hoped that no medical man will be found unscrupulous enough to take up the unenviable position of doctor to it.

THE MECHANISM OF THE ACCOMMODATION OF THE EYE FOR DISTANCE.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—In last month's number of the GAZETTE you publish a rather long criticism on Professor Stuart's paper, which appeared in the *Journal of Physiology* for March 29th, 1904. Not having seen the paper in question, one cannot pretend to offer any comments; but I should like to point out some very obvious mistakes in your criticism itself. In this you ascribe to Anderson Stuart the first discovery "that the suspensory ligament is firmly attached to the vitreous, forming a strong limiting membrane quite independent of the lens capsule." I find that Iwanhoff and Younan, if not absolutely before Stuart, were certainly not after him in their description of this piece of anatomy. As a matter of fact, I think they were both before him. Again, you say, "he showed that Stilling's is a real canal, easily demonstrated by staining and easily distended by injecting fluid." Anyone reading this, and not knowing to the contrary, would thing Stuart was also the first to point this out, whereas it was not so. It was known and demonstrated long before Stuart's paper, but not by him; it is, moreover, quite easily demonstrable.

Your criticism winds up with: "Thus we have provided the liquid central part of the vitreous that Tscherning wanted for the full explanation of his theory," etc. This fact also was known and recognised long before Stuart wrote his paper and before Tscherning propounded his theory on accommodation, and leads one to think you must have read Tscherning's account of his theory wrongly, because there was no need for Stuart's paper to point out that the central part of the vitreous was fluid and no need for Tscherning's wonderful inference, or its becoming fluid because it is known to be fluid. One cannot help thinking that Tscherning is taking Mark Twain's advice on this point, and only prophesying when he knows, that is if he drew the inference.—I am, etc.,

S. H. HUGHES.

Sydney, Nov. 17th, 1904.

[We are surprised that Mr. Hughes should venture on a criticism of a review of a paper that he admits he has not seen; also, that while questioning one or two comparatively unimportant points, he should have failed to observe two or three conspicuous errors that have crept into the GAZETTE article, one of which errors, moreover, he quotes as a discovery of Iwanoff and Younan! Neither Iwanoff, Younan, nor Stuart described the suspensory ligament as "firmly attached to the vitreous, forming a strong limiting membrane quite independent of the lens capsule." What was meant was that the suspensory ligament has a firm attachment to the vitreous wall as well as forming a capsule of the lens independent of the hyaloid. Amongst the numerous investigators of the anatomy of the suspensory ligament there is very great disagreement as to its exact arrangement; and the distinctness of its two attachments, one to the vitreous and the other to the ciliary bodies, with their quite different functions, is a new point brought out by Stuart in his paper under review. Again, though several observers had, before Stuart, described the layer of the hyaloid in the fossa patellaris, others denied its existence, and we believe it was Stuart who, in 1884 or 1885, practically settled the question in its favour. The other errors unobserved by Mr. Hughes are the word "ciliary" instead of "capsular," in the fourth line, and also the word 'posterior," which should be "anterior," in the 37th line of the second column. Mr. Hughes' second objection is that anyone reading the article would assume that Stuart was the first to point out the existence of the canal of Stilling. But if Mr. Hughes had considered the context he would have seen that that would be a very unjustifiable assumption. It was in connection with his paper that Stuart showed that Stilling's is a real canal, "easily demonstrated, etc." There is no implication that he was the first to discover the canal, which was, of course, known and demonstrated long before Stuart's paper, though Mr. Hughes is probably also aware that certain observers deny the existence of the canal in the adult. Others describe it as a poor, attenuated sort of thing, while none of them appear to assign any function to it beyond saying that it is "probably" a lymph channel; though, as most authorities (but not all) say it has a blind anterior extremity, it is not easy to accept that theory. So far as we know, the *role* aassigned to the canal by Stuart is quite new, and it was preparatory to explaining this *role* that he "showed it was easily demonstrable," as Mr. Hughes would have seen had he read Stuart's paper. Finally, if, as Mr. Hughes says, the central part of the vitreous is known to be fluid, it is strange that Tscherning did not know it, and that he (Tscherning) should further say it is a surprising inference to have forced on us that it should become fluid when accommodation reaches its maximum. If Mr. Hughes had also read Tscherning's paper he would have seen that he did draw that inference precisely as quoted, though he (Mr. Hughes) concludes by questioning that statement also.—PERISCOPIST.]

AFTER-EFFECTS OF OPIATES.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—Dr. Kennedy in his interesting address, published in the last issue of the A.M. GAZETTE, asks for the experience of other medical men as to opiates and their after-effects. All preparations of opium leave unpleasant after-effects in some patients. I find a combination of morphia and calomel very effective. I usually give morph. sulph. gr. $\frac{1}{16}$, calomel gr. $\frac{1}{8}$, pulv. ipec. gr $\frac{1}{32}$, camphor gr. $\frac{1}{16}$; four tablets to be taken immediately, one every half-hour afterwards until pain is relieved, but not more than 12 to be taken. In my wide country practice I find this tablet of the greatest value, and after-effects are not very common.—I am, etc., JAMES D. PURDY.

Hutt, N.Z., Dec. 1st, 1904.

"THE SMELL OF PHTHISIS."

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—Dr. Hirschfeld, of Brisbane, in his paper "On some Diagnostic Signs of Early Phthisis," says that he cannot accurately describe the smell of phthisis. To me it is the smell of hops, with which I used to be familiar in my early days in my native county of Kent. I am inclined to differ from him as to its source, for I think it is an emanation from the skin. It is the room in which my patients strip to be examined, and not my consulting-room, which requires to be ventilated after their presence.—I am, etc.,

Adelaide, ALFRED LENDON.
December 1st, 1904.

ON SOME DIAGNOSTIC SIGNS OF EARLY PHTHISIS.

(*To the Editor of the Australasian Medical Gazette.*)

Sir,—I have read Dr. Hirschfeld's paper on this subject in your issue of November 21st with interest, and although he raises points perhaps worthy of further discussion, I only wish at the moment to refer to his concluding paragraph, which reads as follows:—"Before the diagnosis of phthisis is arrived at and treatment resolved upon, all other co-existing affections must be eliminated by a thorough examination of the patient, and principally his throat. *Otherwise it may happen that a patient with a latent phthisis is sent to a sanatorium, where he would have an unusually good chance of contracting phthisis a second time.*" In regard to the first portion of the above paragraph, there will, I am sure, be unanimity of opinion, and I only quote it here for the sake of the context. But the latter portion, which I have taken the liberty to place in italics, contains a suggestion so foreign to all teaching and experience on the subject, that I think those of us who have for years been engaged in sanatorium work may fairly look to Dr. Hirschfeld for an explanation.

In criticism of Dr. Hirschfeld's statement I might point out that such unusual risk of infection, assuming it to be existent, would likewise endanger the medical, nursing, and general staffs who take service in such institutions, and also to a lesser degree the persons living in the immediate neighbourhood. Among such residents I know of no history to support Dr. Hirschfeld's statement, and my own little experience on the subject is amply confirmed by that of men like Theodore Williams, Cornet, Heron, Hance, Achterman, and many others whose names are household words in this department of medicine. In the village of Görbersdorf, for instance, where Brehmer founded his great institution for the treatment of consumption, it is a fact that the number of deaths from phthisis among the natives has actually diminished since the sanatorium was opened, although the population itself has increased; the same was the case at Falkenstein, in the Taunus, according to Dettweiler, and at Rehburg, according to Michaelis. That does not support the theory that the sanatorium is a source of infection. In regard to the latent cases Dr. Hirschfeld specifically mentions, the same argument would apply, and I know of nothing to support him. Charitable institutions such as the Queen Victoria Homes do not as a rule receive such cases, and I cannot, therefore, speak from experience here. But I do know of certain German and English sanatoria for the wealthier classes where it is no uncommon thing for patients with arrested disease to purposely return to their old institutions for the midsummer or other vacation in order to become further invigorated for the business of life. They would hardly do so if there was even a probable, not to mention "an unusually good chance of contracting phthisis a second time." Further, it is no secret that the majority of medical men at the present moment in charge of English sanatoria are themselves cases of arrested or "latent phthisis," and if they had evidence of such unusual danger of reinfection they would hardly make it the business of their lives to live among phthisics. On the contrary, their action is a direct challenge to statements like that of Dr. Hirschfeld, which, if unrefuted, would go to support the unfortunate prejudice with which certain sections of the laity still regard any and every institution for the treatment of tuberculosis. For the sake of these institutions in general, and of sanatoria in particular, I hope Dr. Hirschfeld wil see his way to modify the statement I have quoted, or else to give some definite evidence in its support.—I am, etc.,

M. McIntyre Sinclair, M.D., D.P.H.,
Res. Med. Supt. Queen Victoria Sanatorium,
Wentworth Falls, N.S.W.

OBITUARY.

D. Astley Gresswell, M.A., M.D. (Oxon.), Melbourne.

We deeply regret to record the death of Dr. Dan Astley Gresswell, chairman of the Board of Public Health, and permanent head of the Victorian Health Department, which occurred on December 10th at his residence, East Melbourne. For nearly fifteen years Dr. Gresswell has been one of the most valued public servants of Victoria, discharging the duties of his responsible office with conscientiousness and zeal. Both in his public, his professional and his private capacities Dr. Gresswell earned and held the esteem, the goodwill and the respect of all who knew him. He was born in Lincolnshire in 1853, and was the son of Mr. Dan Gresswell, a veterinary surgeon, noted throughout the country for his skill. He had a distinguished academic career, winning a £500 scholarship at Oxford. He graduated M.A., and subsequently, at the end of his medical course, he took the M.D. degree, his thesis being on scarlatina.

When the Victorian Health Department was reorganised in 1889 (as the result of recommendations made by a royal commission) Sir Graham Berry, who was then Agent-General being asked to make a recommendation of the office of medical inspector of the Central Board of Health, selected Dr. Gresswell, who was at that time a medical inspector of the British Local Government Board. He arrived in Melbourne on March 20th, 1890, and on 25th of the same month commenced duty. Dr. Gresswell was appointed chairman of the board, in addition to his medical office. In 1901 he was constituted permanent head of the Health Department. The triple office of chairman and chief officer of the board and head of the department necessitated close attention to a vast amount of detail, and many monuments of his industry as medical expert and administrator remain. A noteworthy example was his report on a localised outbreak of dysentery in Melbourne in February, 1903, and its relation to the water supply. In the preparation of bills for the protection of public health his knowledge was invaluable to the Government. He was the author of the Wine Adulteration Act, which has operated most beneficially in purifying the trade of gross abuses, and the Meat Supervision Act, which is a measure of even greater importance. He was also largely responsible for the Cremation Act, and had endeavoured to secure the passing of the Food Adulteration Bill and the Milk Supervision Bill, which would have raised the health code of Victoria to a high state of efficiency. Dr. Gresswell was author of treatises on The Use of Oyxgen as a Therapeutic Agent, Darwinism and the Medical Profession, and Diphtheria. When he was absent from duty in the early part of this year Mr. J. W. Styles was gazetted chairman of the board, and Dr. Norris acted as chief medical officer. Though the Minister was arranging to give Dr. Gresswell extended leave when his death was announced, the only step taken during his final illness was to appoint Mr. J. W. Colville, the secretary, as acting head of the department.

Dr. Gresswell's last illness was brief. It commenced on November 23rd, when he attended a meeting of the Board of Public Health, and appeared to be in his usual state of health, which had been rather indifferent for some time. After witnessing a test of a fire extinguisher he went home. In the evening he became ill. He was suffering from jaundice, to which he had been subject at intervals for several years. He was attended by Drs. D. Grant and J. F. Wilkinson, with Drs. Syme and Bird as consultants. Towards the end of last week he became much weaker, and died on December 10th. In November, 1898, Dr. Gresswell had an attack of jaundice so severe as to necessitate absence from duty till May, 1899. From that illness he appeared to completely recover, and he enjoyed fair, though not robust, health till last February. It then became evident that he was physically unfit for duty, but he still remained at work. It was not until after his death that his most intimate acquaintances, apart from his medical advisers, knew what his complaint was. A deputation from the board last February requested the Government to allow Dr. Gresswell six months' leave of absence on full pay, and the refusal with which they were met caused a good deal of unfavourable comment at the time. On this occasion he was confined to his house for four months. Resuming duty in a much weakened condition in May, he remained in harness to within a fortnight of his death. Dr. Gresswell leaves a widow, but no children.

The interment, which took place at the Boroondara Cemetery, was attended by a large number of prominent men, notwithstanding the very short time which had elapsed since Dr. Gresswell's death, and the fact that it was not then generally known. Among the public men present were the Premier (Mr. Bent), the Chief Secretary (Sir Samuel Gillott), Professor Allen, Mr. J. Clayton (town clerk); the members of the Board of Health; Dr. Norris, acting medical officer of the board, representing the public service; and many others. The pall-bearers were Captain Fitzpatrick, representing his Excellency the Governor; Mr. Bent, Mr. C. A. Topp, Dr. Gresswell's oldest colleague; Mr. J. H. Gearing, oldest remaining member of the original board; Mr. W. Neill, representing the relatives; Dr. Springthorpe, representing the Australian Health Society and St. John Ambulance Association; Cr. C. J. Ham, representing the City

Council; and Dr. Howard, representing the Medical Society of Victoria, of which Dr. Gresswell was president.

NOTES AND QUERIES.

A LODGE doctor asks our opinion upon the following case:—

Three weeks ago a member of an Oddfellows' Lodge here "invited" another man to settle a dispute by fighting. He sustained a Colles fracture and came to me with it. I declined to put him on the funds of the lodge, and told him I was not called upon to attend such cases through the lodge. He formally brought this before the lodge, and I now have a letter from the secretary saying that the lodge approved of my action in not putting him on the funds, but "they were of opinion" that he was entitled to medical attention. This, I think, is unfair. I saved the lodge funds by declining to put him on the sick list, yet they ask me to attend him at lodge rates. My agreement is signed in conformity with the rules of the Order, one of which is that the medical officer is not called on to attend illness caused by the misconduct of the member. I will be glad to hear if you think I should insist upon charging fees for my attendance.

⁂ We think our correspondent has acted quite in accordance with the usual practice, and we think he would be perfectly justified in insisting upon his fees being paid, the member by his action having clearly placed himself outside any claim for attendance as a lodge patient.

"Octagon" enquires:—

1. In a recent number of the *British Medical Journal* a correspondent, who enquired under what conditions a medical man should refuse a death certificate and inform the coroner, was told that the law requires him to give a certificate of the cause of heath in *all* cases, and that there is no stipulation for him to notify the coroner in *any* case whatsoever. Does this answer apply also to New South Wales, or do different regulations obtain here?

2. (*a*) What steps should be taken to disinfect the clothes in which the first attendance on a case proving to be scarlet fever has been made? (*b*) How should one disinfect waiting and consulting rooms in which a scarlet fever patient has been? Is the washing of chair or couch used by the patient with disinfectant solution sufficient?

3. Is the law requiring the head of a house in which a case of notifiable infectious disease occurs to notify such (apart from and in addition to the notification by the medical attendant, if any) ever enforced in New South Wales?

4. Is a medical man justified in advising a patient already an inmate of a lying-in home, where cases of puerperal sepsis have recently occurred, to leave and go elsewhere for confinement? If so, for how long should the "nurse" be tabooed?

1. Dr. R. H. Todd, barrister-at-law, has kindly furnished the following reply to this question:—

This answer is not applicable to New South Wales. There is no statutory provision in New South Wales for the certification by a medical practitioner of the cause of a death. The "tenant of the house or place" is the only person required to give information to the Registrar. The "Registration of Births, Deaths and Marriages Act 1899" by section 27 provides, "In each case of the death of any person in New South Wales, the tenant of the house or place shall within thirty days next thereafter inform the district registrar of such death and of all particulars concerning the same according to the forms of registration hereinbefore referred to." And by section 8 (i). "Every district registrar shall inform himself carefully of every. . . . death happening in his district, etc."

There is no statutory obligation on a medical practitioner to notify a coroner of a death. But there is a general duty on all persons, the neglect of which might create liabilities, to give information to the peace officers (which practically means the local police authority or the coroner) of all deaths, the circumstances of which create suspicion of crime as the cause; and from the medical point of view this practically means all deaths arising from or accelerated by other causes than those which are recognised as common illness.

The practice is for a medical practitioner who has attended a deceased person during his last illness to enable the deceased's friends to comply with the requirements of the regulations of the Registrar-General for the registration of deaths by certifying the cause of death on the form provided by the Registrar-General. If, however, the medical practitioner does not know the cause, or believes that death was not due merely to common illness, he expresses his inability to comply with the request of the deceased's friends to certify the cause. If he knows death was not due to common illness, he does not certify. The onus then falls on those whose duty it is to provide for the burial of satisfying the Registrar by some other means. If the medical practitioner finds that inquiry is sought to be evaded, he would probably feel it his duty to communicate with the police or the coroner. Medical practitioners frequently do, for the sake of their own convenience and that of the deceased's friends, advise the police or the coroner of the deaths of patients the causes of which they are unable or unwilling to certify to.

Dr. W. G. Armstrong, City Health Officer, kindly replied as follows:—

2. (*a*) A good domestic method of disinfecting clothing is to place the articles on two or three broom-handles or wooden rods placed across the top of an ordinary washing copper. The whole should be covered with a sheet to retain heat, and steamed for half an hour or longer. Woollen goods are apt to be shrunk by this method. They may be treated by exposure to the fumes of formaldehyde vapour in a *close* chamber or cupboard. An alformant lamp (cost about 7s 6d) may be used to generate the fumes from paraform tablets. At least 20 tablets of the paraform per 1000 cubic feet of air space in the cupboard should be used, and the clothes should be hung up loosely in the cupboard so as to be freely exposed to the vapour. About six hours' exposure is required. (*b*) In addition to the cleansing of the couch or chair on which the patient has been, the floor (if covered with linoleum or other smooth covering) should be washed or wiped with a cloth wet with a disinfectant solution.

3. Though the strict letter of the law requires both the medical practitioner and the householder to notify (dual notification), in practice only one notification—that of the medical practitioner—is usually forwarded. In case of failure to notify a notifiable infectious illness, both the householder and every medical practitioner attending the case would be liable to prosecution. If the case is not attended by a medical practitioner, the householder is, of course, alone liable.

4. The welfare of the patient must, of course, be the *first* consideration, and however hard it may be upon the unfortunate nurse in charge of the lying-in home, there can be no question that a medical man would be justified in advising the patient to remove elsewhere for the confinement. Four weeks is the shortest time for the nurse herself to be "tabooed." But her lying-in home might be effectually disinfected and used again in a much less time.

Insanity in New South Wales.

Dr. Eric Sinclair, Inspector-General of the Insane, reports that on December 31st, 1903, the number of insane persons under official cognisance was 4950, as compared with 4687 on December 31st, 1902, the increase during the year being 263. The average annual increase for the past 20 years was 127. The proportion of the insane to the general population is one insane patient to 289 persons in the State.

The number of admissions during the year was 1065. Of these, 881 were admitted for the first time, and 184 had been in the same hospital on some previous occasion, this being the largest number of admissions in one year yet recorded. Of the admissions, natives of New South Wales formed 50 per cent. ; other Australian States, 11 per cent. ; England, 18 per cent. ; Ireland, 9¼ per cent. ; Scotland, 4¾ per cent. ; and other countries, 7 per cent.

The number of patients discharged recovered was 379, equal to a rate of 35·58 per cent. on the admissions and re-admissions. In this return are included the figures from the Hospital for Imbeciles at Newcastle, from which, however, no recoveries can be expected. Excluding Newcastle, the recovery rate is increased by 1·5 per cent., making it 37·08 per cent. The number of those discharged improved was 65, showing a proportion to the admissions and re-admissions of 6·10 per cent.

The number of patients discharged on probation, or granted leave of absence to the care of friends during the year, was 356, making with those remaining from the previous year 509. Of these, 158 were discharged recovered, 154 were returned to hospital, and 4 died, leaving still on leave at the close of the year 193, as compared with 153 left at the close of the previous year.

The deaths numbered 350, 242 of these being of men, and 108 of women. Calculated on the average number resident, this gives a percentage of 7·57. By far the larger number of deaths were due to cerebral and nervous diseases. The proportion was 148 out of a total of 350, or 42·3 per cent. Of these, 65 were cases of general paralysis, a disease which is increasing in modern times out of proportion to the increase of population. Pulmonary consumption is given as the cause of 44 deaths, and old age and debility of 36.

The number of escapes was 50. All were followed, and with the exception of 10, returned to hospital within a short time of their escape. Of those not retaken, none were of the dangerous class.

The number of accidents reported in the hospitals was 19, of which one ended fatally. There were two cases of suicide.

For several years past attention has been called to the need for additional buildings for the accommodation of the number of patients who are yearly added to those under care in the hospitals for the insane, and it is regretted that it is again necessary to bring this under notice. Since the completion of Kenmore Hospital and of the female division at Rydalmere, no works which add to the accommodation have been undertaken, with the result that, on December 31st, 1903, there were 194 patients in the hospitals more than they could properly accommodate. This overcrowding is a serious matter, and if continued will prove fatal to the reputation which has been built up for the department by years of careful work. It is not easy to carry out proper medical treatment in wards where patients are so closely packed as to compel association of those who may react detrimentally on each other, nor is it easy to avoid accidents due to the irritation thus caused.

The marked increase in the number of admissions of late is an indication of the urgent need for this additional accommodation; and although it is not expected the increase will be maintained at the same high rate, still, with the enlarging population of the State, it cannot be greatly diminished. The rate of increase up to 1901 was on the whole steady; but since then it has been rapid—out of proportion to the previous rate. That this is due to the trying period the country has passed through, owing to drought and financial depression, there can be little doubt; and when recovery takes place, and the conditions of life become easier, a lessened amount of insanity may be expected.

The amount expended on the maintenance of patients during 1903 was £151,309 16s 3d, being £33 0s 8¾d per patient for the year. The weekly cost was 12s 8¼d. The State, however, received £21,190 15s from the estates of the patients, and from the friends who were responsible for their maintenance, and £1135 8s 7d from the sale of fat and old stores, which reduced the cost of each patient to £28 3s 2¾d for the year, or to 10s 10d per week. This is, therefore, the actual charge the State is put to for the maintenance of the patients.

The Department has sustained a severe loss in the death of Dr. Herbert Blaxland, late Medical Superintendent of Gladesville, on April 10th, 1904, and in the retirement of Dr. Chisholm Ross, late Medical Superintendent of Callan Park. It is with regret the death of Dr. F. Norton Manning, on June 18th, 1903, is recorded. Although several years have elapsed since his retirement from the Department, it seems fitting to notice his death in this context. The present state of efficiency of the hospitals and their high reputation throughout Australia are his best monument.

The number of attendants, nurses, and servants who left or were dismissed was 135. Of these, 15 were dismissed, 4 retired, being over the age of 60 years, 2 died, and 114 resigned.

Reception House for the Insane, Darlinghurst.—The number of patients remaining on December 31st, 1902, was 6, and the number admitted during the year 927, making a total of 933 under care and treatment. This number was made up of two classes—those under certificates of insanity (486 in number) and those under remand under secton 7 of the Lunacy Act of 1898, of whom there were 447. Taking these classes separately—of the 486 under certificate, 13 were discharged recovered, 471 were sent to hospitals for the insane, and 2 remained at the end of the year; whilst of the 447 on remand, 249 were discharged recovered, 184 were sent to the police court, certified as insane, and returned to the reception house, 2 died, and 12 remained at the end of the year. It will be seen that 184 of the number were first admitted in one and subsequently in the other class. The superintendent of the reception house reports that 5 cases under certificate, and 21 cases on remand, were admitted twice during the year 1903, and that 36 of the patients admitted during the year had in some one of the then 30 years during which the institution has been in existence previously been inmates. The large majority of these recurrent cases were suffering from the temporary insanity due to drink. The total number of patients discharged as recovered was 262, and there were only 2 deaths. Considering that a very large proportion of the cases were in an acute stage of the malady, the death-rate is a very small one, and the fact that no case of serious accident or suicide has occurred is creditable to the management.

PUBLIC HEALTH.

New South Wales.

Health of the Metropolis.—Dr. W. G. Armstrong, the City Health Officer, reports the deaths of residents during November numbered 452, a figure which corresponds to an annual mortality rate of 10·49 per 1000 living. In calculating these figures, the population of the shipping in the harbour and deaths among such population are excluded. Deaths in the two hospitals for the insane, which are situated within the metropolis, are also excluded. When the rate given is corrected by the inclusion of the metropolitan proportion of deaths in all benevolent asylums and hospitals for the insane throughout the State, it becomes 11·29 per 1000. The death rate is an unusually low one for the month of November. Diarrhœal diseases caused 90 deaths, of which 77 were attributed to enteritis and 13 to diarrhœa. Although these figures are very much larger than those experienced in October, and show the influence of the advancing summer, they are well below the average for November (105 during the past five years). The principal infectious diseases caused 9 deaths, of which 2 were ascribed to scarlet fever, 2 to whooping cough, 2 to diphtheria, and 3 to typhoid fever. The mortality from phthisis was 43, the quinquennial average for November being 40. Respiratory diseases were considerably less fatal than is usual for this month. Bronchitis only caused 7 deaths, and pneumonia 13. Diseases of the heart and blood vessels caused 60 deaths, and cancer in its various manifestations 36. Infantile mortality was unusually low, November being generally a very fatal month for children. The number of infantile deaths registered was 138, a number which is equivalent to an infantile mortality rate of 119 per 1000 births. The causes which principally contributed to infantile mortality were diarrhœa, 9 deaths; prematurity, 16 deaths; developmental diseases, 23 deaths; convulsions, 5 deaths; enteritis, 67 deaths. Notified attacks of infectious disease during the month totalled 281, of which 175 were scarlet fever, 47 diphtheria, and 59 typhoid fever.

Food Adulteration.—At the Burwood Court recently a storekeeper, of Burwood, was charged with having sold to the prejudice of the purchaser, an inspector of health to the local council, food which was not of the nature, substance or quality of the food demanded. The defendant made no denial of the fact that cream of tartar bought from his shop by the inspector consisted of bone ash chemically treated, plaster of paris, and starch. He gave evidence proving that he had ordered some cases of cream of tartar from the colonial representative of a Glasgow firm. He had caused analysis to be carried out since it had been discovered that the compound was adulterated, and had proof that other cases were adulterated. He had bought the cream of tartar in good faith, believing it to be genuine, and he had paid the full market price for it. Mr. MacNevin said that he recognised that Mr. Murray was certainly not blamable for the adulteration, and he suggested that further proceedings might be instituted to sheet home the blame to the really culpable parties. He imposed a fine of £1, with 2s 6d costs.

Victoria.

Sterilising Wines.—The Director of Agriculture has been furnished with a report by Mr. Burney, agricultural expert, of the results of a practical experiment as to the value of pasteurisation of wines. Mr. Burney reports that a comparison of samples of pasteurised and unpasteurised wines was all in favour of the pasteurised in case of old wines, and those heavily fortified. The experiments conclusively proved the value of sterilising wines as an ordinary and general process. They proved also that all wines benefited by the treatment, more especially in the development of the bouquet, and that the process in no way interfered with the wines maturing. The experiments further demonstrated that it was possible to make a mature and sweet wine of low alcoholic strength, thereby saving the large expense of fortification.

Infectious Diseases.—The returns relating to infectious diseases submitted to the Melbourne Board of Health last month showed a general decrease. The figures were:—Typhoid fever: For the whole State, for the fortnight ended 19th November, 1903, 16 cases, 2 deaths; 1904, 19 cases, one death; for the metropolitan area, 1903, 8 cases, 1 death; 1904, 9 cases, no deaths. Diphtheria: For the whole State, 1903, 30 cases, 4 deaths; 1904, 78 cases, 5 deaths; for the metropolitan area, 1903, 19 cases, 3 deaths; 1904, 31 cases, no deaths. Scarlet fever: For the whole State, 1903, 47 cases, 1 death; 1904, 21 cases, no deaths; metropolitan area, 1903, 35 cases, 1 death; 1904, 10 cases, 1 death.

Queensland.

Brisbane Sewers.—The Public Health Commissioner, Dr. Ham, accompanied by the City Engineer, the City Inspector, and Chief Inspector Simpson, recently inspected the Lilley-street sewer which runs into the river. One branch of this sewer—called the Bowen-street sewer—was specially inspected. It was discovered that every few yards there were holes in the sewers which had been left in order that connections might be made, and the holes allowed the sewer gas to escape, and afforded a very convenient means for ingress and egress for rats. This sewer has been in existence for many years, but no plan of the connection or of the sewer itself seems to have been kept, although it drains a very large area. Dr. Ham stated that the Council were very willing to assist him in the matter, and that Brisbane would never get rid of plague until it had a proper sewerage scheme, and these old sewers were smashed up and destroyed. An inspection was also made of dilapidated properties in the vicinity of the Bowen-street sewer, a district which, since plague first broke out, is understood to have supplied several cases of the disease.

Tasmania.

Vital Statistics.—During the month of October, 171 births—81 males and 90 females—were registered in the registration districts of Hobart and Launceston. This is 24 less than the corresponding month last year, and an increase of 27·8 as compared with the average of the births registered in October during the last five-yearly period. The deaths in Hobart and Launceston numbered 63—29 males and 34 females; 16 deaths, or 25·40 per cent. of the whole, took place in public institutions. The total number of deaths registered in the two districts is two less than in the corresponding month last year, and shows a decrease of deaths registered in October during the last five-yearly period. The deaths under five years of age numbered 10, or 15·88 per cent., of which nine were under one year of age; the deaths between 5 and 65 years of age numbered 35, or 55·55 per cent.; and the deaths, 65 years and upwards, numbered 18, or 28·57 per cent.

UNIVERSITY INTELLIGENCE.

Melbourne.—At a meeting of the Senate of the University of Melbourne last month an amendment of statute vii, made by the University Council, fixing the tenure of the appointment of lecturers, was considered. The amendment provided that each lecturer should be appointed for a term of five years, instead of for one year, as at present, but should be removable by the council at pleasure. The Senate varied the amendment by deciding that the lecturers should be removable at any time on the vote of an absolute majority of the council. The other main provision of the amendment, that no person who had attained the age of 60 years should be qualified for appointment as a lecturer, was varied by the exemption from the provision of lecturers in the art school. The amendment of the statute, as further amended, was then adopted. Amendments of statutes and regulations for the establishment of a faculty of dentistry and of a degree in dental surgery, which had been made by the council of the University, were also considered, and after consideration in committee, the statutes and regulations were adopted.

New Zealand.—The Senate of the University of Otago have decided to create a Chair in Physiology. The Medical School is in Dunedin, and the salary proposed is £600 with fees. The selection of a suitable candidate is in the hands of a committee in England, consisting of Sir Michael Foster, Professor Schäfer, and Dr. C. J. Martin, F.R.S.

Sydney.—At a meeting of the Senate on December 5th, Mr. E. J. Goddard, B.A., was appointed junior demonstrator in biology for the year 1905. It was resolved that a short optional course of clinical bacteriology and hæmatology be given by Dr. Barling in the month of January to students of the fourth and fifth years in medicine. A letter was received from the president of the Queen Victoria Scholarship Fund, stating that the committee of the fund proposed to hand over to the University in the month of January a sum of £520, to be applied as a scholarship, under the following conditions:—1. That it be awarded to the best girl matriculant of the year, and be tenable for three years under the conditions usually existing. 2. That the scholar must satisfy the Chancellor privately that she requires the money, otherwise it shall be applied as a bursary for girls, the original winner retaining the title of the Queen Victoria scholar. It was resolved that the offer be accepted with thanks. The following gentlemen were reappointed as honorary officers in connection with the University Dental Hospital for a period of one year from January 1st, 1905, or until the date of amalgamation with the Sydney Dental Hospital, if earlier:—Honorary dental surgeons, the lecturers in dental subjects, Messrs. H. S. Du Vernet, D.D.S., Adin T. Parsons, D.D.S., P.B. Reading, L.D.S., W. H. Weston, M.D., D.D.S., P. A. Ash, D.D.S., E. F. Deck, L.D.S., Donald Smith; honorary consulting surgeons, Messrs. E. W. Fairfax, M.B. C. MacLaurin, M.B.; honorary anæsthetists, Messrs. E. H. Binney, M.B. (lecturer), C. B. Blackburn, M.D.., E. Ludowici, M.B.

HOSPITAL INTELLIGENCE.

Auckland Hospital, N.Z.—The Royal Commission which inquired into the complaints concerning the administration of the Auckland Hospital has reported adversely on the management and administration of that institution. In consequence of friction created by the senior medical officer, many of the ablest members of the honorary medical staff resigned. Since the appointment of this officer it is reported that there has been a steady deterioration in the surgical and medical work of the hospital, to the manifest detriment of patients. Instances are not infrequent where fractures have been set and attended to by a junior, with disastrous results. The commission finds that most of the hospital records and other documents produced in evidence were incorrectly and carelessly kept, and that the responsibility rests on the senior medical officer. A number of recommendations for the better conduct of the hospital are made in the report.

Infectious Diseases Hospital, Melbourne.—At the last meeting of the committee of the Queen's Memorial Infectious Diseases Hospital some consideration was given to the bill now before Parliament dealing with the hospital. The question of compelling the other municipalities concerned, which have hitherto held aloof, to pay the cost of the maintenance of the institution *ab initio* had been placed before the Premier by a sub-committee, but without any definite promise being obtained from Mr. Bent. The meeting, which represented only a bare quorum, decided to leave it in the hands of members of Parliament representing their districts to see that the interests of the present contributors were safeguarded during the passage of the bill through the Houses. The medical report showed that 17 cases were admitted since the 12th ult., and 13 discharged, leaving 32 in the institution. Of the cases admitted 9 were diphtheria, 6 scarlet fever and 2 tonsillitis. Since October 1st, when the hospital was opened, 63 patients have been admitted.

Walker Convalescent Hospital, Sydney.—From the eleventh annual report for the year ended September 30th, 1904, we learn that the number of patients in hospital September 30th, 1903, was 69; admitted during year, 850; discharged, 851; remaining in hospital September 30th, 1904, 68. Of these, 722 were discharged cured, 52 relieved, 8 unrelieved, and 1 died. Daily average, 70; average residence of discharged patients, 26 days. The admissions for the year (850), while much smaller than during the previous 12 months, compare very favourably when it is borne in mind that owing to extensive repairs half the wards and the entire Children's Cottage were closed during the greater part of July and August. The hospital is now again in full working order. There is a constant demand for beds, especially for women, most of whom frequently wait a month and sometimes longer, as priority is always given to the general hospitals for some of their more urgent cases. Patients returned to general hospitals show a smaller percentage this year, though at times the list of serious cases has been large, chiefly those suffering from heart disease, especially rheumatic endocarditis, most of whom, however, derived considerable benefit from treatment. Enteric fever patients did remarkably well this year, no relapse being manifested. A suspected case of diphtheria occurring at the Children's Cottage, and transferred to the Sydney Hospital, afterwards proved to be tonsillitis. There were several cases of mumps among the patients, all of whom necessarily had to return to their homes. One death, that of a child suffering from chorea and endocarditis, occurred after only five days' residence in hospital. The entire buildings have been renovated and placed in thorough repair. The repairs included painting (both exterior and interior), plumbing, roofing, increased efficiency of hot-water service, landing-stage and retaining-wall for boathouse. The work has resulted in a marked improvement both in appearance and effectiveness.

St. George Cottage Hospital, N.S.W.—At the last committee meeting of the St. George Cottage Hospital, Mr. W. Kenwood offered to supply complete plans of the building, and Alderman Harradence stated he would render plans for a new service of gas. Both offers were thankfully accepted. The bank passbook showed that there was an overdraft of £199 10s 2d. The special endowment promised by the late Premier had not been placed to the credit of the hospital, and the secretary was instructed to write to the Premier requesting him to receive a deputation regarding one matter.

Stawell Hospital, Victoria.—The hospital wards erected and equipped by the family of the late Dr. W. H. Syme, who was for many years a practitioner in Stawell, were formally opened by Sir John Forrest last month. They have been built and fitted with the most modern requirements by Mrs. Syme as a free gift as a memorial of her late husband, whose long and valuable services to Stawell and the hospital well deserved a fitting memorial. The wards are erected some 100 yards to the north-west of the main hospital, and are built of brick, which has all been tuck-pointed. The whole of the ground underneath has been asphalted. The building is some 150 feet in length by a width of about 24 feet. There are two wards, male and female, about 40 feet in length by 17 feet wide, and each containing four beds, with lockers and patent adjustable invalid tables, cane easy chairs, large six-sided screen, in white linen, worked with red letters, the whole being washable, as are the cushion covers. The large table is of white enamelled iron, there being also a smaller one with heavy glass top. The ventilation is perfect; the windows have a heavy copper netting screen on the outside. Between the two wards are the nurses' quarters, consisting of a bedroom, comfortably fitted up, and a sitting-room. Both these rooms have windows facing into the wards, so that by drawing a screen to one side the nurse on duty can command the whole of the building. At the opposite ends of each ward are commodious bathrooms, fitted with enamelled baths and hot water heaters.

Mount St. Margaret Hospital for Insane, N.S.W.—The private hospital for insane at Mount St. Margaret, Ryde, only accommodates 14 patients, but the demands upon the institution have for some time been so pressing that it was recently determined to erect an additional building to accommodate 40 patients, thus bringing up the number to 54. The foundation-stone of the new building was laid on November 18th by his Eminence Cardinal Moran, who delivered a brief address, in which he commended the charity being carried on at Mount St. Margaret. The new building is to be of two stories, 128 feet by 56 feet, and of Romanesque design. The appointments are to be of the most modern and complete character. The front of the existing building is also to be altered and modernised in uniformity with the new structure.

Perth Hospital, W.A.—From the eighth annual report of the board of management of this institution we learn that during the year there were treated in this hospital 1123 casualties and accidents, 1858 in-patients and 3399 out-patients, making a total of 6380, compared with 5955 last year. The deaths numbered 165, being 8·8 per centum of the in-patients treated. Twenty-seven of these deaths occurred within 24 hours after admission. The typhoid cases for the year were 346, of which there were 17 deaths. For 1902-3 there were 319 cases, with 18 deaths. The cases of diphtheria were 11 (two deaths) against 2 (one death) for 1902-3. Cases of consumption were 74, of which 25 died, against 68 cases with 38 deaths for 1902-3. The out-patients' re-attendances numbered 16,733, compared with 16,566 for 1902-3. The operations for the year numbered 360. It will be noticed that the typhoid cases are far in excess of the previous year. This caused the accommodation on the medical side to be taxed to its utmost limits. Fortunately, the number of deaths from this disease did not exceed those of the previous year. The expenditure for the year amounted to £12,271 17s 4d (with £139 15s 4d carried forward to 1904-5), compared with £11,976 1s 9d for 1902. The cost of the in-patients, after making an allowance for out-patients, gives the average cost of £1 13s 11d per head per week. This result compares very favourably with the cost per head of the hospitals in the eastern States, when allowance is made for increase of wages and cost of living in this State. The receipts of the year are as follow:—Government grant, £10,000; from other sources, £2411 12s 8d. Contributions have greatly increased this year. The Hospital Saturday Fund Committee resulted in the hospital being presented with £492 11s 9d. By the will of the late Mr. F. DeCruize the hospital benefited to the extent of £107 16s, while the Western Australian Turf Club presented a donation of £100. The Government have called for tenders for the new wing and it is hoped that this work will be pushed on, as the accommodation was more taxed this year than ever before, the daily average of cases this year being 130, compared with 124 last year and 113 two years ago. During the year a ward has been constructed for cases of consumption.

Sydney Hospital.—At the monthly meeting of the board of directors, accounts for November, amounting to £1901 7s 7d, were passed for payment. Mr. W. H. Flavelle forwarded a cheque for £139 6s 7d, being the final payment from the estate of the late Adam Guy Flavelle, making £3139 6s 7d received altogether. Further leave of absence for a period of one month was granted to Miss Creal, matron, to enable her to spend more time amongst the American hospitals. The matter of rebuilding the south wing was again considered, and it was decided to place certain definite proposals before the Government. Tenders for supplies, 1905, as recommended by the house committee, were approved.

HUDSON'S "EUMENTHOL" JUJUBES (Registered) are a Gum Jujube containing the active constituents of well-known Antiseptics, Eucalyptol, Thymus Vulg., Pinus Sylvestris, Mentha Arv., with Benzo-Borate of Sodium, etc., and exhibit the antiseptic properties in a fragrant and efficient form. Sold by all chemists; tins, 1s 6d. Are Antiseptic, Prophylactic, reduce Sensibility of Mucous Membrane. Mr. W. A. Dixon, F.I.C., F.C.S., Public Analyst of Sydney, after making exhaustive tests, says:—"There is no doubt but that 'Eumenthol' Jujubes have a wonderful effect in the destruction of bacteria and preventing their growth. . . . I have made a comparative test of 'Eumenthol' Essence and Creosote, and find that there is little difference in their bactericidal action."—[ADVT.]

MEDICAL NOTES.

Patent Medicines.—Dr. Richard Arthur, M.L.A., New South Wales, intends to bring before Parliament a bill compelling proprietors and manufacturers of patent medicines to state on the label of each preparation the formula from which such medicine was prepared.

Coroner's Court Bill.—This bill has passed both Houses of the New South Wales Parliament. By the provisions most inquests will be turned simply into a coronial inquiry. Except under certain conditions indicated in the bill a jury will be dispensed with, and when a jury is thought to be necessary it will consist of six instead of 12 jurors. The proposed alteration will, it is expected, effect a saving of £1000 per annum.

Linnean Society of New South Wales.—At a meeting of the Linnean Society of New South Wales, held on November 30th, Dr. T. Storie Dixson presiding, it was decided to make the following addition to the rules:—"It shall not be competent for an ordinary member of the society to hold office on the council and as Macleay Bacteriologist or Linnean Macleay Fellow simultaneously." Papers were read by Drs. A. Jefferis Turner and R. Greig Smith, and others.

Sydney Medical Mission.—At the fourth annual meeting of the Sydney Medical Mission (the object of which is to provide a doctor to visit in their own homes those who cannot afford to obtain medical attendance) held on December 1st, the annual report showed that 3216 visits were paid to the homes of 720 patients, the attendances at the dispensary of 2256 patients numbered 8614, operations requiring the administration of an anæsthetic numbered 12, and the total number of patients treated was 2256. The good work done by the members of the lady visitors' staff, who had paid 1061 visits during the year, was emphasised. Foremost amongst those who had actively helped in the work of the mission during the year were Dr. Kate Hogg, Dr. Agnes Bennett, Dr. Storie Dixson, Dr. W. H. Read, Dr. Spiller Brandon, Dr. Mawson, and Dr. Taylor Young. The donation of £40 from the Hospital Saturday Fund was referred to, and also a sum of £50 received from the trustees of the late Sir Daniel Cooper's estate, which it was proposed to withhold from the general funds and invest as the nucleus of an endowment or building fund. This object was commended to the sympathies of subscribers. The interest taken in the work of the mission had been much increased by several drawing-room meetings, and the list of subscribers had been greatly added to thereby. The balance-sheet read by Mr. H. Budden, hon. treasurer, showed a credit balance of £3 18s 11d to the general funds, besides £50 which it was proposed to use as a special fund, as already stated.

At a recent meeting of the Melbourne Hospital committee an honorarium of £15 was voted to Mr. B. J. Taylor, the hospital engineer. Mr. Taylor recently constructed an apparatus for sterilising large quantities of water for hospital purposes, and installed a system of pipes for its distribution to the various wards and operating theatres. The physicians and surgeons to the hospital have expressed themselves highly pleased with the invention, which is of the greatest benefit to the institution.

Sydney Pathological Club.—The last meeting for this year of the Sydney Pathological Club was held at the Clinical Laboratory, Sydney Hospital, on December 1st, at 8 p.m.. Dr. Chapman made the following communications:—(1) "Contribution to our knowledge of the Secretion of Pancreatic Juice"; (2) "A Criticism of a New Test for Disease of the Pancreas." Prof. Wilson and Dr Hill gave a demonstration of micro-photographs illustrating some points in embryology of the marsupials, also a preliminary communication on the structure of that part of the fourth ventricle which adjoins the central canal of the spinal cord. Professor Welsh gave a demonstration of cancerous tumours from a lioness and a tiger.

Railway and Tramway Hospital Fund.—Some 15 years ago a Railway and Tramway Employees' Hospital Fund was formed for the purpose of providing for the sick and those who become incapacitated through accident. When the fund was initiated, it was calculated that on an average cases would not require longer treatment than six weeks. The fund is maintained by an annual collection from the employees in the united service, and every workman is expected to contribute a quarter day's pay per annum. The fund is augmented by donations from the officers, and the yearly contributions aggregate £1000. The increased cost of maintenance of patients suffering from tuberculosis has suggested the advisableness of making a second collection. It is proposed to place this to the credit of an account for the sole purpose of combating the ravages of consumption. No case of tuberculosis can be successfully treated in less than six months, and a few cases of this disease would materially help to deplete the fund.

A Doctor's Fees.—A case which contained points of interest both to the medical profession and the public generally was heard and decided before Dr. Cole, P.M., and a bench of magistrates, at the Caulfield Court last month, Dr. Rothwell Adam, of Collins-street, Melbourne, being the complainant, and Mrs. Cooper, of Caulfield, married woman, the defendant. Mrs. Cooper, early in the month of March, was at a private hospital in Armadale, and was being attended there by Dr. Murray, of Caulfield, when it became necessary to have a consultation. Mrs. Cooper was told that Dr. Adam would be called in, and she neither assented nor dissented to the proposal. Mr. Cooper, the husband of the defendant, and Mrs. King, the sister of the defendant, were consulted on the matter, and their consent given to the operation being performed. The fees were fixed at between 80 and 100 guineas, to cover everything. Dr. Rothwell Adam performed the operation, which was successful. When the patient recovered she declined to pay, and a summons was issued against her for £50 (being the limit of the jurisdiction of the justices), setting up the claim that she was liable on an implied contract, as the work had been performed and accepted, and that, having separate property, the defendant could make a contract to bind that property independently of her husband. For the defence it was admitted that the work had been done, but contended that no express contract had been proved sufficient to relieve the husband of his common law liability of providing for necessaries for his wife, and further contending that the operation was a necessary one. After argument, Dr. Cole gave a verdict for the defendant, on the ground that no express contract had been proved sufficient to make the defendant liable. Another case, in which Dr. Murray, of Caulfield, sued the same defendant, was dismissed by the Bench, by consent.

Cadbury's Milk Chocolate.—We have received from Cadbury Bros., Ltd., a sample of their milk chocolate, a confection of exquisite flavour and a food of special value. It is made by the most modern methods, only high-class cocoa, fine loaf sugar, and full cream fresh milk being used. The following is the analysis and gives the percentages of its constituents: Fat, 30·3 per cent. (cocoa butter, 22·6; milk fat, 7·7); cane sugar, 42·0; milk sugar, 10·9; proteids or albuminoids, 10·3; ash, 2·1; moisture, 1·6; indigestible fibre, 0·75; undetermined bodies, 2·05; total, 100·00 per cent. Alkalinity of the soluble ash (calculated as $K_220=0{\cdot}16$ per cent.). These figures show clearly the value of this milk chocolate as a food. A considerable proportion of the cocoa butter is replaced by the more readily assimilable fat, *i.e.*, milk fat, which gives to the chocolate a delicate mellow flavour as well as adding to its digestibility. Part of the cane sugar is replaced by milk sugar, whereas in ordinary plain chocolate the sugar amounts from 50 to 60 per cent; in Cadbury's milk chocolate only a little over 40 per cent. is present, so that the exceeding sweet taste is avoided, and also the thirst-producing tendency which is noticed in chocolates having high cane sugar contents. The albuminoids of the milk and cocoa, both readily digestible, are present to the extent of 10·3 per cent., thus rendering the chocolate of particular value to those who have to undergo severe exercise. The chocolate is entirely free from colouring matters and preservatives, such as salicylic acid, boric acid or borax, and formalin, and the low alkalinity of the soluble ash show that the cocoa used in the manufacture is free from added alkalies. The percentage of moisture is so low that the chocolate possesses excellent keeping qualities, and undergoes no deterioration in any climate.

PERSONAL ITEMS.

The Hon. Dr. C. F. Marks, F.R.C.S., has resigned his position on the Brisbane Hospital staff, after nearly 22 years' service.

Dr. McDowell was presented with a silver-mounted pocket-book by the ladies attending his lectures in connection with St. John Ambulance Association, Auckland.

Dr. E. H. Williams, hon. surgeon of the Dunedin Nursing Corps of the St. John's Ambulance Association, was recently presented with a pair of photogravures framed in oak and gold.

Dr. D. H. Young, for some time practising in Dunedin, has removed to Milton, N.Z., having taken over the appointments held by the late Dr. Menzies.

Dr. John Reekie, of the Bay of Islands, has been selected as medical resident for the Tologa Bay District, on the East Coast, N.Z.

Dr. Morice, of Greymouth, N.Z., has been appointed to the Commission of Peace.

Dr. W. J. Tilley, late of Lismore, N.S.W., has disposed of his practice to Dr. J. S. Milne, late of North Sydney. Dr. Tilley is taking a trip to the old country, *via* America, and will be away for about nine months.

Dr. J. O. H. Mayne has resigned his appointment as Medical Superintendent of the Brisbane Hospital.

Prof. J. T. Wilson, of University of Sydney, was entertained at dinner by the Sydney Biological Club on December 6th, prior to his departure for Europe on a 12 months' trip by the P. & O. steamer "Moldavia."

At the annual meeting of the Queensland Branch of the British Medical Association held on December 2nd, Dr. A. B. Brockway was presented with a handsome marble clock with inscription and a stylographic pen in recognition of his services as honorary secretary of the Branch for past five years.

Dr. James R. Purdy is still practising at Hutt, N.Z., and has not left for England as currently reported.

Dr. W. P. Seed has resigned the appointment of District Medical Officer, Coolgardie, W.A.

Dr. T. Hewlett, of Nicholson-street, Fitzroy, Victoria, who died on September 28th, by his will bequeathed real estate of the value of £4380 and personal of £1760.

At a representative meeting of citizens of Longreach, Queensland, held recently, Dr. H. S. Lindsay, who has been appointed surgeon of the Whitiange Hospital, near Auckland, N.Z., was presented with a purse of sovereigns from the townspeople.

The s.s. "Sikh" left Hongkong for Chingwan-tao on October 27th to embark coolies for Durban, South Africa. Drs. S. T. Knaggs and E. K. Overand sailed with the vessel.

Dr. David Grant has been elected a member of the council of the University of Melbourne.

Dr. Walter Hull, late of Armidale, N.S.W., has succeeded to the practice of Dr. Kirwan King, of Nowra, N.S.W.

Dr. Williamson, Medical Superintendent of the Hospital for the Insane at Parramatta, has left Sydney on a three months' trip to China and Japan.

Dr. R. Scot Skirving and Mr. Hankins, who have recently returned from a trip to England, were entertained at a welcome dinner by the honorary medical staff of the Royal Prince Alfred Hospital at the Paris House on November 17th. Dr. Syney Jones, consulting physician to the hospital, presided. The toasts proposed were "The King," "Our Guests," "The Royal Prince Alfred Hospital." This is the first occasion on which the honorary medical staff of the Hospital have met as a staff at dinner. and it is proposed that there should be an annual dinner on a date as near as possible to the anniversary of the opening of the hospital.

We are glad to learn that Dr. F. W. Hall, of College-street, Sydney, has recovered from the effects of a severe accident which befel him last month.

Dr. Gibson, of Hobart, has been appointed a commissioner of fisheries.

Dr. W. E. Jones, who has been appointed Inspector-General of Victorian Hospitals for the Insane, will leave London on January 16th next.

Dr. H. Kirwan King, after a residence of 18 years in the Shoalhaven district, N.S.W., was entertained at a conversazione in the Nowra School of Arts Hall on December 9th, on the eve of his departure for England. Dr. King was presented with an engrossed statement from the Nowra Council for his services as an alderman and also as mayor. He was also presented on behalf of residents with an address and album of photographic views of the district.

Dr. T. Boyd, one of the honorary surgeons to the Melbourne Hospital, has been laid up with an attack of gallstones in Dr. Moore's private hospital. His many friends are very anxious about him, and it is hoped he will soon recover

Dr. Dunhill, one of the resident medical officers of the Melbourne Hospital, is also in Dr. Moore's private hospital suffering from a poisoned finger.

Dr W. R. Fox has moved to Collins-street from Fitzroy, having purchased the residence occupied lately by Drs. Turner and Strong.

Dr. J. Johnston, of Williamstown, has been appointed honorary anæsthetist to the Melbourne Hospital.

The following members of the Victorian Branch of the Australian Army Medical Corps were presented to Brigadier-General Finn, the new Commonwealth Commandant, by Surgeon-General Williams on the 30th ult., viz.:—Colonel Ryan, P.M.O., Victoria, Lieut.-Colonel Embling, Major Home, Major Cuscaden, Major Gandevia, Captains Bryant, Buich, Sutherland and Vance.

Dr. John Merrilees, of Hawthorn, who was married lately, purposes to take a long holiday and revisit England after an absence of 16 years.

Dr. Godfrey Howitt has been acting as an hon. outpatient surgeon to the Melbourne Hospital for the last six weeks. His father was considered one of the leading surgeons of Melbourne 25 years ago.

MILITARY INTELLIGENCE.

PRESENTATION OF THE KING'S COLOURS TO THE ARMY MEDICAL CORPS.

"The presentation of King's Colours to an Army Medical Corps is an event quite unique in the history of the Empire." A smoke concert was held on December 6th, presided over by Surgeon-General Williams, C.B., D.G.H.S., on the occasion of the handing over to the New South Wales Army Medical Corps of the King's Colours, recently received at Melbourne by Lieutenant-Colonel Roth, D.S.O., P.M.O., at the hands of his Excellency the Governor-General. Surgeon-General Williams was pleasingly reminiscent regarding what all branches of the British Army that served in the Boer war readily admitted to be the really magnificent work of the New South Wales Army Medical Corps throughout that struggle. The signal compliment paid the corps by his Majesty the King was, he said, fitting recompense for all the hardships the members had suffered in South Africa, and he personally found great pride in the reflection that of the 30 officers and 240 men comprising the three contingents of the corps that went out to South Africa, every one of them did his duty faithfully and well. When the colours were unfurled by Major Martin, the whole company rose and saluted them. During the evening an interesting musical programme was contributed by members of the corps, and light refreshments were provided.

MILITARY APPOINTMENTS.

NEW ZEALAND.

Robert Church to be Surgeon-Captain, New Zealand Volunteer Medical Staff, Dunedin Highland Rifles.

NEW SOUTH WALES.

Lieutenants D. Luker and G. A. Innes Mackay, of the A.M.C., passed the recent Army Medical School.

MEDICAL APPOINTMENTS.

NEW SOUTH WALES.

Williams, Frederick Bernard, M.D., Toronto, to be Government Medical Officer and Vaccinator at Nyngan, vice Dr. E. R. Roseby, resigned.

WEST AUSTRALIA.

Lovegrove, Frederick T. A., to be Acting District Medical Officer and Public Vaccinator, Marble Bar.

Lister, Harold, M.B., to be District Medical Officer and Public Vaccinator at Jarrahdale, *vice* Theo. J. Ick, M.B., resigned.

Rigby, W. H., M.B., to be Officer of Health at Collie District.

VICTORIA.

Boyd, W. R., M.D., M.R.C.S., to be physician to in-patients at the Melbourne Hospital, *vice* Dr. John Williams, resigned.

Morris, Dr. T. N., to be Resident Medical Officer of the Midwifery Department, Woman's Hospital, Melbourne, *vice* Dr. C. E Dennis, resigned.

SOUTH AUSTRALIA.

Reissmann, Charles Henry, M.D., M.R.C.P., to be Honorary Assistant Physician to the Consumptive Department, Adelaide Hospital.

Russell, Herbert Henry Ernest, L.R.C.S., to be Honorary Assistant Bacteriologist, Adelaide Hospital, *vice* Verco, resigned.

Hamilton, T. K., M.D., L.F.R.C.S. (Irel.); and Hamilton, C. W., M.D. (Dub.), to be Honorary Laryngologists to the Consumptive Sanatorium, Belair, S.A.

QUEENSLAND.

Ffrost, A. F., M.B., Ch.B., to be Official Visitor to the Reception House at Townsville.

McLean, Dr. J. B., to be Acting Medical Superintendent at the Brisbane Hospital, *vice* Dr. J. O'N. Mayne, resigned.

White, George Vincent, M.B., B.S. (Melb.), to be Acting Health Officer at Thursday Island, Surgeon of the Prison at that place, Medical Superintendent of the Quarantine Station at Friday Island, and Medical Officer for lepers detained in the lazaret at Friday Island, during the absence of Dr. Joseph Leathom Wassell, M.B.

Hopkins, G. H., F.R.C.S., to be Hon. Visiting Surgeon, Brisbane Hospital.

Salter, A. G., to be Hon. Assistant Surgeon, Brisbane Hospital.

Orr, A. W., M.D., L.K.Q.C.P., to be Hon. Assistant Surgeon to the Eye, Ear, Nose, and Throat Department, Brisbane Hospital.

NEW ZEALAND.

The following gentlemen to be Public Vaccinators for the districts set opposite their names respectively, viz.:—

Shone, William Vernon, M.R.C.S. (Eng.), L.R.C.P. (Lond.), for the District of Christchurch.

Moore, Thomas Charles, M.B., Ch.B. (Dub.), for the District of Napier, *vice* Dr. Edgar, resigned.

Craig, George, M.B. (Edin.), for the District of Ohinemuri.

PROCEEDINGS OF AUSTRALASIAN MEDICAL BOARDS.

VICTORIA.

Kendall, Theodore Mailler, L.R.C.P. *et* S. (Edin.), 1881.

BIRTHS, MARRIAGES AND DEATHS.

BIRTHS.

CHAPMAN.—November 15th, at Maranoa, Muston-street, Mosman, Sydney, the wife of Henry G. Chapman, M.D.—a son.

PRIOR.—November 23rd, at Parramatta, N.S.W., the wife of Guy P. U. Prior, M.R.C.S., L.R.C.P.—a daughter.

MARRIAGES.

MONCRIEFF—PEDEN.—December 7, 1904, at St. Augustine's Church, Neutral Bay, Sydney, by Rev. G. North-Ash, Dr. Edward Woods Moncrieff, son of J. C. B. Moncrieff, of Adelaide, South Australia, to Emily Frances, third surviving daughter of the late Magnus Jackson Peden and Mrs. Peden, of Yowrie, Neutral Bay.

OFFICER—MASTERTON.—On the 12th October, at "The Terricks," Glenferrie, by Rev. W. G. Maconochie, M.A., assisted by Rev. Geo. Tait, M.A., David McMaster, fifth son of the late John Officer, to Lisbeth Forbes, second daughter of William Masterton.

SCOTT—RANKIN.—November 16th, at St. Mary's, Sydney, by the Rev. Father Hayden, Albion Park, Arthur Scott, M.B., C.M. (Edin.), son of the late P. H. Scott, of Burrowa, to Mary, daughter of the late Angus Rankin, of Bumbowlee, Tumut, N.S.W.

DEATHS.

GRESSWELL.—On the 10th December, at East Melbourne, D. Astley Gresswell, M.D.

FINLAY.—November 11, at Bowenfels, N.S.W., William Finlay, M.D., F.F.P.S.G., and L.R.C.P. (Edin.), eldest son of the late Arthur Finlay, Esq., Crossford, Lanark, Scotland, aged 48 years.

SUPPLEMENT TO THE AUSTRALASIAN MEDICAL GAZETTE,
December 20, 1904.

THE FAMOUS ZETZ-SPA

THE ZETZ-SPA SPRING.

Australia's Great Mineral Water.

ZETZ-SPA MINERAL WATER.

THE source of this natural mineral water is a spring that was tapped at a depth of 550 feet, when boring for coal, at the Talbragar River, Ballimore, near Dubbo, N.S.W. It is over 17 years since it commenced to flow, and has been running at the rate of over 2000 gallons per hour ever since. It is capable of rising 30 feet in the air, through tubing. Mr. Slee, the superintendent of drills, was one of the first to recognise the value of the spring, from the resemblance of the water to that of some of the German Spas in taste, etc.

ANOTHER VIEW OF THE OUTFLOW.

It soon gained a reputation amongst the inhabitants of the district for its value as a medicinal agent in cases of rheumatism and dyspepsia. It is an alkaline water, containing over 307 grains of bicarbonate of soda to the gallon, in addition to potash, lime, magnesia, etc., as shown by the analysis of the Board of Health.

Messrs. Tooth & Co., of the Kent Brewery, Sydney, having purchased the spring and the freehold of the land upon which it is situated, are now bottling the water and bringing it prominently under the notice of the medical profession and of the public. They are under a bond of £500 to the Board of Health to maintain the Zetz-Spa water up to its original and unadulterated standard of purity.

FILLING THE DRUMS WITH ZETZ-SPA WATER.

The photographs accompanying this article will help to give some idea of the volume of water flowing from the spring, as well as of the manner in which it is collected in tinned steel drums and forwarded to Sydney for bottling.

Messrs. Tooth & Co. have already secured the patronage of several medical men, who not only use it as a table water themselves, but prescribe it for their patients. It will be found to be a very palatable, refreshing drink in hot weather.

The water is highly charged with carbonic acid gas, and, in addition to being a suitable diluent for more powerful beverages, it should prove valuable in cases of gastric and hepatic derangements where an alkaline water is indicated.

In chemical composition it somewhat resembles Vichy water. The analysis of the water made by the officials of the Board of